Math6.org Activities for Fraction Readiness

Vocabulary Studies

___1) On-Line Word Search
___2) 3 Column Notes
___3) Flash Cards
___4) Crossword Puzzle
___5) Matching Practice
___6) Vocabulary Millionaire!

Tests and Games

___66) Mid Chapter Quiz
___67) Quiz Bowl
___68) Practice Test
___69) Millionaire
___70) Divisibility Rules Millionaire
___71) Prime Factorization Millionaire
___72) Fraction Ready Millionaire

Activities by Lesson

4.1 Divisibility Rules

___1) Divisibility Rules Guide
___2) Learn the Divisibility Rules
___ (GP) for each rule (2-13)
___ Drill for each rule (2-13)
___3) Rules 2, 3 and 5 Quiz
___4) Tested Rules Quiz
___5) Digit Sums Practice
___6) Sieve of Eratosthenes
___7) Prime / Composite Lesson
___8) Prime / Composite (GP)
___9) Lesson Quiz
___10) **Divisibility Rules Millionaire

4.2 Factors and Prime Factorization

___11) Review Worksheet
___12) Memorize the Prime Factors
___13) Prime Factorization Lesson
___14) Prime Factorization (GP)
___15) Factoring Ladders (GP)
___16) Lesson Quiz
___17) **Prime Factorization Millionaire

4.3 Greatest Common Factors

___18) Review Worksheet
___19) GCF Lesson
___20) GCF (GP)
___21) Lesson Quiz
___22) ** Zoo Groups

4.4 Decimals and Fractions

___23) Review Worksheet
___24) Fractions to Decimals Lesson
___25) Fractions to Decimals (GP)
___26) Lesson Quiz
___27) **Let's Eat!

4.5 Equivalent Fractions

___28) Review Worksheet
___29) Equivalent Fractions Worksheet
___30) Common Style (GP)
___31) Stoney Method (GP)
___32) Equivalent Fractions Quiz
___33) Reducing Fractions Worksheet
___34) Reducing Fractions Lesson
___35) Reducing Fractions (GP)
___36) Lowest Terms Quiz
___37) Lesson Quiz
___38) **Extrapolations

4.6 Compare and Order Fractions

___39) Review Worksheet
___40) Compare Fractions (GP)
___41) Ordering Fractions (GP)
___42) Lesson Quiz
___43) **Sort Data with Excel

4.7 Mixed Numbers and Improper Fractions

___44) Review Worksheet
___45) Mixed Numbers (GP)
___46) Mixed Numbers Drill
___47) Improper Fractions (GP)
___48) Improper Fractions Drill
___49) Lesson Quiz
___50) **Negotiate the Mine Field

4.8 Add and Subtract Like Denominators

___51) Review Worksheet
___52) Simplifying Fractions
___53) Simplify Fractions Lesson
___54) Simplify Fractions (GP)
___55) Simplify Fractions Drill
___56) Like Denominators (GP)
___57) Lesson Quiz
___58) **Easy on the EOG

4.9 Multiply by Whole Numbers

___59) Review Worksheet
___60) Multiplying Fractions Lesson
___61) Multiply Fractions (GP)
___62) Simplify First (GP)
___63) Standard Style (GP)
___64) Lesson Quiz
___65) **Excel -Multiply Fractions

Name _____

Word List – 3 Column Notes

Word	Definition	Example
Composite	A whole number with 3 or more factors.	**48 has several factors.**
Denominator		
Divisibility		
Divisible		
Equivalent		
Factor		
Factorization		
GCF		
Improper		
Numerator		
Prime		
Proper		
Repeating		
Simplest		
Terminating		

Math Journal - Chapter 4 - Fraction Readiness

4.01 The divisibility rule for 6 is that a number must be divisible by 2 and 3. Use this rule to help you invent a rule for 12, 15 and 18. Check your algorithm to see if you are correct.

4.02 Make up a rhyme or song to help your classmates memorize the first 10 prime numbers. {2, 3, 5, 7, 11, 13, 17, 19, 23, 29}

4.03 Today's extension @ Math6.org is a Zoo Groups - complete this extension or make a double bubble map to compare and contrast the list method and prime factoring method for finding GCF. Write a paragraph to discuss the similarities and differences.

4.04 "Repeating decimals" is a brand new concept for 6th grade students. Think of a slogan to let the student know that they can quit dividing when the number begins to repeat. Then make a poster, brochure or other presentation that will help your classmates see how a repeating decimal is found.

4.05 Today's extension @ Math6.org will teach you an advanced but important and fairly easy to do concept called extrapolations. I would like you to complete this extension. OR create a 4x4 that models simplifying the following 4 fractions. $\{^{36}/_{48}$; $^{27}/_{63}$; $^{18}/_{24}$ and $^{125}/_{600}\}$

4.06 Today's extension @ Math6.org will teach you how to use Microsoft Excel to sort data (put them in order). Complete this extension or explain how you would determine whether $^{15}/_{51}$ and $^{3}/_{17}$ are equivalent fractions.

4.07 Create a flow map that explains how to change $12\ ^{3}/_{5}$ into an improper fraction. Then write a "How To" paragraph to communicate the process.

4.08 When writing 1 as a fraction in a subtraction problem, how do you know what the numerator and denominator should be? Give an example.

4.09 Today's Extension will teach you how to use a spreadsheet (Excel) to multiply fractions. Use this extension to complete your homework or create a double bubble map to compare and contrast the simplify first style with multiply then simplify. Write a persuasive paragraph to try to persuade your readers to employ the style you prefer.

General Scoring Rubric:

0 No Response
1 Wrong response
2 Weak response
3 Showed understanding
4 Showed understanding and cited an example
5 Showed understanding, cited examples and communicated effectively enough to enable others to understand.

Math Objectives

1.05

Develop fluency in the use of factors, multiples, exponential notation, and prime factorization.

Essential Question

Student A likes to sum the digits and check for divisibility by 3 and 9, then examine the final digit to check for 2, 5 and 10. She checks the last 2 digits to see if the number is divisible by 4 and then applies the 2 and 3 rule to check for divisibility by 6. Student B prefers to check for divisibility in numerical order. If you were to be required to use one process or the other, which would you choose? (Explain)

Wayne County Schools 21st Century Instructional Lesson Plan
Divisibility Rules

NAME:	Subject: Math
Date:	Grade Level (s): 6

Standards/Objectives Addressed (NCSCOS)

1.05
Develop fluency in the use of factors, multiples, exponential notation, and prime factorization.

Essential Question(s) (In student-friendly terms)

Student A likes to sum the digits and check for divisibility by 3 and 9, then examine the final digit to check for 2, 5 and 10. She checks the last 2 digits to see if the number is divisible by 4 and then applies the 2 and 3 rule to check for divisibility by 6. Student B prefers to check for divisibility in numerical order. If you were to be required to use one process or the other, which would you choose? (Explain)

Assess (Look at student data to plan. Use formative and/or summative assessments.)

A common error (weakness) in this skill is that students hesitate to sum the digits for application of the 3 and nine rules. Students should review (assess) compatible numbers to make this process easier and more likely to occur.

High Yield Instructional Strategies (check all that apply to the lesson)

Identifying similarities and differences	✓	Reinforcing effort and providing recognition	✓	Nonlinguistic representation	✓	Setting objectives and providing feedback	✓
Questions, cues, and advance organizers	✓	Summarizing and note taking	✓	Cooperative learning	✓	Generating and testing hypotheses	✓
Homework and practice	✓						

Learner Diversity

- **How will you differentiate to meet the needs of all learners in your class?**

504 modifications ET and RA. Additional student and teacher modeling, paired learning groups, and concrete representations will help to guide all students to reach expected outcomes. Differentiated assignments and practice will focus on remediation and enrichment of lower and higher ability groups.

Engage (Anticipatory Set)

- **Capture the students' attention, stimulate their thinking and help them access prior knowledge. Consider novelty, meaning and emotion.**

Today we will learn about divisibility rules, prime numbers and composite numbers. Once we master the 2, 3, 5, 7 rules, 2digit prime numbers will be a snap. Add the 11 and 13 rules and 3 digit primes will be no problems either.

Instructional Practices Used in this Lesson

Coaching	✓	**Providing Directions/ Instructions**	✓	**Learning Centers**	
Discussion	✓	**Providing opportunities for practice**	✓	**Teacher-directed Questions and Answers**	✓
Hands-on experiences	✓	**Direct Instruction**	✓	**Modeling**	✓
Presentation	✓	**Testing**		Other: Math6.org	✓

Suggested brained-based learning activities promoting the above Instructional Practices					
Think-Pair-Share	✓	Instructional Games		Music/Rhyme/Rhythm/Rap	
Thinking Maps	✓	Student Facilitators		Movement	
Technology Integration	✓	Storytelling		Humor	
Use of visuals	✓	Field Trips(Virtual)		Project/Problem- Based Learning	
Metaphor/Simile/Analogy		Reciprocal Teaching		Mnemonics	
Peer/Self Assessment	✓	Drawing or illustrating		Other:	
Writing/Reflecting/Journals	✓	Simulations/Role Play		Other: Math6.org	✓

Type(s) of Grouping Used:

___small group _✓_student pairs _✓_whole group _✓_individual

Explain, Explore, Elaborate

Content Chunks: How will you divide and teach the content?

- **Transitions should be used every 5-15 minutes to keep the students' brains engaged.**
- **Involve students in an analysis of their explorations.**
- **Use reflective activities to clarify and modify student understanding.**
- **Give students time to think, plan, investigate and organize collected information.**
- **Give students the opportunity to expand and solidify their understanding of the concept and/or apply it to a real-world situation.**

See next page for instructional detail.

Evaluate (Feedback/Closure)

- **Evaluate throughout the lesson. Are students able to answer the Essential Question(s)?**
- **Present students with a scoring guide (such as a rubric) at the beginning to self-assess.**
- **What assessment(s) will be used to be sure the students are successful?**

The divisibility rule for 6 is that a number must be divisible by 2 and 3. Use this rule to help you invent rules for 12, 15 and 18. Check your algorithm to see if you are correct.

Describe, Analyze, Reflect:

- **How effective was the lesson? How did the strategies help the students deepen their understanding? Cite evidence of student work, performance, behaviors, and/or remarks to support your view.**
- **What caused the lesson to go well? What challenges did you encounter?**
- **What did you do to contribute to the lesson's effectiveness?**
- **What learning did you take from this lesson to apply to future lessons? What would you do differently next time?**

Date: _____ Time Frame: **160 minutes**

Divisibility Rules

Essential Question: Student A likes to sum the digits and check for divisibility by 3 and 9, then examine the final digit to check for 2, 5 and 10. She checks the last 2 digits to see if the number is divisible by 4 and then applies the 2 and 3 rule to check for divisibility by 6. Student B prefers to check for divisibility in numerical order. If you were to be required to use one process or the other, which would you choose? (Explain)

Objective (s) Numbers: **1.05**
Outcomes: Develop fluency in the use of factors, multiples, exponential notation, and prime factorization.

Materials: Textbook pages 152-155; Divisibility Rules Worksheet
Anticipatory Set: Today we will learn about divisibility rules, prime numbers and composite numbers.

During the Lesson

Presentation of Information:
Integration of Other Subjects: Reading (vocabulary, problem solving, analyzing expectation)
Integration of Reading: Reading for information and interpretation.
Integration of Technology: Computer, Projector, PowerPoint, Internet

Modeling: A number is divisible by another number if it is a true multiple of the other number (or if the division problem does not have a remainder.
24 is divisible by 3 because 24 ÷ 3 = 8 with no remainder.

Differentiation: 504 modifications ET and RA. Additional student and teacher modeling will help to guide all students to reach expected outcomes.

Guided Practice: Have the students copy the divisibility rules into their notes. Distribute the divisibility rules worksheet and model using the divisibility rules to check the following numbers for divisibility. {2154 ; 3438 ; 3600 ; 24,237}

After the Lesson

Independent Practice: Text page 154-155 {1–28, 40, 41, 48–58}
AIG: {17–58}
Assign workbook page 4.1

Closure / Assessment: The divisibility rule for 6 is that a number must be divisible by 2 and 3. Use this rule to help you invent rules for 12, 15 and 18. Check your algorithm to see if you are correct.

Integration with School-wide Focus: Improve mathematics computation and problem solving.

Related Math6.org Activities: There are **37** (not a typo) activities connected with this lesson

Divisibility Rules Guide
Learn the Divisibility Rules
Rules 2, 3 and 5 Quiz
Tested Rules Quiz
Digit Sums Practice
Sieve of Eratosthenes Lesson
Prime / Composite Lesson
Prime / Composite Guided Practice
**Divisibility Rules Millionaire

Name _____

Divisibility Worksheet

	Number	digit sum	2	3	4	5	6	9	10	Answer
s	1248	15	✓	✓	✓		✓			2, 3, 4, 6

2 – the last digit will be 0, 2, 4, 6, 8
3 – the sum of the digits is a multiple of 3 (3654… 3 + 6 + 5 + 4 = 18 (a multiple of 3)
4 – the last 2 digits are a multiple of 4 (123<u>64</u>… 64 ÷4 = 16)
5 – the last digit will be 5 or 0
6 – the number is divisible by **BOTH** 2 & 3
9 – the sum of the digits is a multiple of 9
10 – the last digit will be 0
12 - the number is divisible by **BOTH** 3 & 4
15 - the number is divisible by **BOTH** 3 & 5

Divisibility Rules	
Divisible By	**Rule**
1	All numbers are divisible by 1
2	If a number ends in 0, 2, 4, 6, 8 it is called "even" and is divisible by 2
3	The sum of the digits is a multiple of 3
4	The last 2 digits are a multiple of 4
5	The number ends with a 5 or 0
6	The number is divisible by 2 **and** 3
9	The sum of the digits is a multiple of 9
10	The number ends with a 0

Math Objectives

1.05

Develop fluency in the use of factors, multiples, exponential notation, and prime factorization.

Essential Question

Today, your teacher has implored you to learn prime factorization since it will make your entire math life much easier. However, learning prime factorization takes a little more work than factoring. What plan could you follow to memorize their prime factors and learn the methods of prime factorization? (action plan)

Wayne County Schools 21st Century Instructional Lesson Plan
Factors and Prime Factorization

NAME:	Subject: Math
Date:	Grade Level (s): 6

Standards/Objectives Addressed (NCSCOS)

1.05
Develop fluency in the use of factors, multiples, exponential notation, and prime factorization.

Essential Question(s) (In student-friendly terms)

Today, your teacher has implored you to learn prime factorization since it will make your entire math life much easier. However, learning prime factorization takes a little more work than factoring. What plan could you follow to memorize their prime factors and learn the methods of prime factorization? (action plan)

Assess (Look at student data to plan. Use formative and/or summative assessments.)

Students need to be masters of the multiplication facts to make this foundation skill simple and quick. Assess student mastery of multiplication facts and provide opportunities to practice the facts through multiplying whole numbers and decimals.

High Yield Instructional Strategies (check all that apply to the lesson)

Identifying similarities and differences	✓	Reinforcing effort and providing recognition	✓	Nonlinguistic representation	✓	Setting objectives and providing feedback	✓
Questions, cues, and advance organizers	✓	Summarizing and note taking	✓	Cooperative learning	✓	Generating and testing hypotheses	✓
Homework and practice	✓						

Learner Diversity

- **How will you differentiate to meet the needs of all learners in your class?**

504 modifications ET and RA. Additional student and teacher modeling, paired learning groups, and concrete representations will help to guide all students to reach expected outcomes. Differentiated assignments and practice will focus on remediation and enrichment of lower and higher ability groups.

Engage (Anticipatory Set)

- **Capture the students' attention, stimulate their thinking and help them access prior knowledge. Consider novelty, meaning and emotion.**

Today we will learn about factors and prime factorization. We will need to examine two versions of factoring today. The list method is often used and will show you all of the factors of a number. Prime factorization is the easiest to use with larger numbers and will help you to quickly and easily find common factors and common multiples.

Instructional Practices Used in this Lesson

Coaching	✓	**Providing Directions/ Instructions**	✓	**Learning Centers**	
Discussion	✓	**Providing opportunities for practice**	✓	**Teacher-directed Questions and Answers**	✓
Hands-on experiences	✓	**Direct Instruction**	✓	**Modeling**	✓
Presentation	✓	**Testing**		Other: Math6.org	✓

Suggested brained-based learning activities promoting the above Instructional Practices					
Think-Pair-Share	✓	Instructional Games		Music/Rhyme/Rhythm/Rap	✓
Thinking Maps	✓	Student Facilitators		Movement	
Technology Integration	✓	Storytelling		Humor	
Use of visuals	✓	Field Trips(Virtual)		Project/Problem- Based Learning	
Metaphor/Simile/Analogy		Reciprocal Teaching		Mnemonics	
Peer/Self Assessment	✓	Drawing or illustrating	✓	Other:	
Writing/Reflecting/Journals	✓	Simulations/Role Play		Other: Math6.org	✓

Type(s) of Grouping Used:

___small group _✓_student pairs _✓_whole group _✓_individual

Explain, Explore, Elaborate

Content Chunks: How will you divide and teach the content?

- **Transitions should be used every 5-15 minutes to keep the students' brains engaged.**
- **Involve students in an analysis of their explorations.**
- **Use reflective activities to clarify and modify student understanding.**
- **Give students time to think, plan, investigate and organize collected information.**
- **Give students the opportunity to expand and solidify their understanding of the concept and/or apply it to a real-world situation.**

See next page for instructional detail.

Evaluate (Feedback/Closure)

- **Evaluate throughout the lesson. Are students able to answer the Essential Question(s)?**
- **Present students with a scoring guide (such as a rubric) at the beginning to self-assess.**
- **What assessment(s) will be used to be sure the students are successful?**

Make up a rhyme or song to help your classmates memorize the first 10 prime numbers. {2, 3, 5, 7, 11, 13, 17, 19, 23, 29}

Describe, Analyze, Reflect:

- **How effective was the lesson? How did the strategies help the students deepen their understanding? Cite evidence of student work, performance, behaviors, and/or remarks to support your view.**
- **What caused the lesson to go well? What challenges did you encounter?**
- **What did you do to contribute to the lesson's effectiveness?**
- **What learning did you take from this lesson to apply to future lessons? What would you do differently next time?**

Date: _____ Time Frame: **80 minutes**

Factors and Prime Factorization

Essential Question: Today, your teacher has implored you to learn prime factorization since it will make your entire math life much easier. However, learning prime factorization takes a little more work than factoring. What plan could you follow to memorize their prime factors and learn the methods of prime factorization? (action plan)

Objective (s) Numbers: **1.05**
Outcomes: Develop fluency in the use of factors, multiples, exponential notation, and prime factorization.

Materials: Textbook pages 156-159
Anticipatory Set: Today we will learn about factors and prime factorization.

Presentation of Information:
Integration of Other Subjects: Writing (poetry)
Reading (vocabulary, problem solving, analyzing expectation)
Integration of Reading: Reading for information and interpretation.
Integration of Technology: Computer, Projector, PowerPoint, Internet

Modeling: We will need to examine two versions of factoring today. The list method is often used and will show you all of the factors of a number. Prime factorization is the easiest to use with larger numbers and will help you to quickly and easily find common factors and common multiples.

Differentiation: 504 modifications ET and RA. Additional student and teacher modeling will help to guide all students to reach expected outcomes.

Guided Practice: Model creating a listing table to help the students to gather all of the factors of a number. Practice using the list tables with the following {49 , 24, 36}

Model Prime Factorization (lesson is available @ Math6.org). Practice finding the prime factorization of 36, 74 and 80.

Inform the students that today's extension @ Math6.org is a Prime Factoring Millionaire. They should try to win if they think they have mastered this skill!

After the Lesson

Independent Practice: Text page 158-159 {1–4, 9–16, 25–31 odd, 51–62}
AIG: {12–16, 25–32, 42, 44, 49, 51–62}
Assign workbook page 4.2

Closure / Assessment: Make up a rhyme or song to help your classmates memorize the first 10 prime numbers. {2, 3, 5, 7, 11, 13, 17, 19, 23, 29}

Integration with School-wide Focus: Improve mathematics computation and problem solving.

Related Math6.org Activities: There are **10** activities connected with this lesson
Memorize the Prime Factors
Factoring Ladders Guided Practice
Prime Factorization Lesson
**Prime Factorization Millionaire
Prime Factorization Guided Practice

Math Objectives

1.05

Develop fluency in the use of factors, multiples, exponential notation, and prime factorization.

Essential Question

You will be shown (have been shown) at least 2 methods for finding the GCF of a data set. Which method are you the most comfortable with? Which method will you choose to use in the future? (Explain)

Wayne County Schools 21st Century Instructional Lesson Plan
Greatest Common Factors

NAME:	Subject: Math
Date:	Grade Level (s): 6

Standards/Objectives Addressed (NCSCOS)

1.05
Develop fluency in the use of factors, multiples, exponential notation, and prime factorization.

Essential Question(s) (In student-friendly terms)

You will be shown (have been shown) at least 2 methods for finding the GCF of a data set. Which method are you the most comfortable with? Which method will you choose to use in the future? (Explain)

Assess (Look at student data to plan. Use formative and/or summative assessments.)

Students need to be masters of prime factorization to make this skill simple and quick. Assess student mastery of prime factorization and provide opportunities to practice the facts through prime factorization drills and exercises.

High Yield Instructional Strategies (check all that apply to the lesson)

Identifying similarities and differences	✓	Reinforcing effort and providing recognition	✓	Nonlinguistic representation	✓	Setting objectives and providing feedback	✓
Questions, cues, and advance organizers	✓	Summarizing and note taking	✓	Cooperative learning	✓	Generating and testing hypotheses	
Homework and practice	✓						

Learner Diversity

- **How will you differentiate to meet the needs of all learners in your class?**

504 modifications ET and RA. Additional student and teacher modeling, paired learning groups, and concrete representations will help to guide all students to reach expected outcomes. Differentiated assignments and practice will focus on remediation and enrichment of lower and higher ability groups.

Engage (Anticipatory Set)

- **Capture the students' attention, stimulate their thinking and help them access prior knowledge. Consider novelty, meaning and emotion.**

Today we learn how to find the greatest common factor of any data set.

Instructional Practices Used in this Lesson

Coaching	✓	**Providing Directions/ Instructions**	✓	**Learning Centers**	
Discussion	✓	**Providing opportunities for practice**	✓	**Teacher-directed Questions and Answers**	✓
Hands-on experiences	✓	**Direct Instruction**	✓	**Modeling**	✓
Presentation	✓	**Testing**		Other: Math6.org	✓

Suggested brained-based learning activities promoting the above Instructional Practices					
Think-Pair-Share	✓	Instructional Games		Music/Rhyme/Rhythm/Rap	
Thinking Maps	✓	Student Facilitators		Movement	
Technology Integration	✓	Storytelling		Humor	
Use of visuals	✓	Field Trips(Virtual)		Project/Problem- Based Learning	
Metaphor/Simile/Analogy		Reciprocal Teaching		Mnemonics	
Peer/Self Assessment	✓	Drawing or illustrating		Other:	
Writing/Reflecting/Journals	✓	Simulations/Role Play		Other: Math6.org	✓

Type(s) of Grouping Used:
___small group _✓_student pairs _✓_whole group _✓_individual

Explain, Explore, Elaborate
Content Chunks: How will you divide and teach the content?

- **Transitions should be used every 5-15 minutes to keep the students' brains engaged.**
- **Involve students in an analysis of their explorations.**
- **Use reflective activities to clarify and modify student understanding.**
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See next page for instructional detail.

Evaluate (Feedback/Closure)

- **Evaluate throughout the lesson. Are students able to answer the Essential Question(s)?**
- **Present students with a scoring guide (such as a rubric) at the beginning to self-assess.**
- **What assessment(s) will be used to be sure the students are successful?**

Today's extension @ Math6.org is a Zoo Groups - complete this extension or make a double bubble map to compare and contrast the list method and prime factoring method for finding GCF. Write a paragraph to discuss the similarities and differences.

Describe, Analyze, Reflect:

- **How effective was the lesson? How did the strategies help the students deepen their understanding? Cite evidence of student work, performance, behaviors, and/or remarks to support your view.**
- **What caused the lesson to go well? What challenges did you encounter?**
- **What did you do to contribute to the lesson's effectiveness?**
- **What learning did you take from this lesson to apply to future lessons? What would you do differently next time?**

Date: _____ Time Frame: **80 minutes**

Greatest Common Factors

Essential Question:	You will be shown (have been shown) at least 2 methods for finding the GCF of a data set. Which method are you the most comfortable with? Which method will you choose to use in the future? (Explain)
Objective (s) Numbers:	**1.05**
Outcomes:	Develop fluency in the use of factors, multiples, exponential notation, and prime factorization.
Materials:	Textbook pages 160-165
Anticipatory Set:	Today we learn how to find the greatest common factor of any data set.

During the Lesson

Presentation of Information:	
Integration of Other Subjects:	Writing (compare/contrast) Reading (vocabulary, problem solving, analyzing expectation)
Integration of Reading:	Reading for information and interpretation.
Integration of Technology:	Computer, Projector, PowerPoint, Internet
Modeling:	There are 2 ways to go about finding the GCF. Listing the factors and using Prime Factorization. I will model listing the factors so that you know what that means, but since using prime factorization is the best way to do this, I will teach that skill. (you will be able use this method for LCM as well)
Differentiation:	504 modifications ET and RA. Additional student and teacher modeling will help to guide all students to reach expected outcomes.
Guided Practice:	Model listing the factors for {18 and 81 ; 75 and 90} Model using Prime Factorization for {18 and 81 ; 75 and 90 ; 16, 28 and 36}

After the Lesson

Independent Practice	Text page 162-163 {1–18, 34, 35, 41–50} **AIG**: {19–50} Assign workbook page 4.3
Closure / Assessment:	Today's extension @ Math6.org is a Zoo Groups - complete this extension or make a double bubble map to compare and contrast the list method and prime factoring method for finding GCF. Write a paragraph to discuss the similarities and differences.

Integration with School-wide Focus: Improve mathematics computation and problem solving.

Related Math6.org Activities: There are **7** activities connected with this lesson

GCF Lesson

GCF Guided Practice

** Zoo Groups

Name _____ Date _____ Class _____

CHAPTER 4

Quiz

Section A

Choose the best answer.

1. 240 is NOT divisible by which of the following?

A 4 **C** 6

B 5 **D** 9

2. What type of number is 51?

F prime **H** composite

G negative **J** even

3. Which of the following is a factor of 42?

A 4 **C** 6

B 5 **D** 22

4. What is the prime factorization of 112?

F $4^2 \cdot 7$ **H** $2^3 \cdot 3 \cdot 5$

G $2^4 \cdot 7$ **J** $8 \cdot 9$

5. What is the greatest common factor of 42 and 66?

A 2 **C** 6

B 3 **D** 72

6. What is the greatest common factor of 24 and 9?

F 2 **H** 6

G 3 **J** 72

7. Renee works at the Candy Boutique making gift candy arrangements. Each arrangement must have the same number of truffles and the same number of suckers. If she has 16 truffles and 24 suckers, and uses all of the pieces of candy, what is the greatest number of arrangements she can make?

A 2 **C** 8

B 3 **D** 6

Name _____ Date _____ Class _____

CHAPTER 4

Quiz

Section A

Choose the best answer.

1. 240 is NOT divisible by which of the following?

A 4 **C** 6

B 5 **D** 9

2. What type of number is 51?

F prime **H** composite

G negative **J** even

3. Which of the following is a factor of 42?

A 4 **C** 6

B 5 **D** 22

4. What is the prime factorization of 112?

F $4^2 \cdot 7$ **H** $2^3 \cdot 3 \cdot 5$

G $2^4 \cdot 7$ **J** $8 \cdot 9$

5. What is the greatest common factor of 42 and 66?

A 2 **C** 6

B 3 **D** 72

6. What is the greatest common factor of 24 and 9?

F 2 **H** 6

G 3 **J** 72

7. Renee works at the Candy Boutique making gift candy arrangements. Each arrangement must have the same number of truffles and the same number of suckers. If she has 16 truffles and 24 suckers, and uses all of the pieces of candy, what is the greatest number of arrangements she can make?

A 2 **C** 8

B 3 **D** 6

Math Objectives

1.03

Compare and order rational numbers.

Essential Question

Today you learned (have learned) how to change fractions into decimals and decimals into fractions. Which process do you find to be the easiest? (Explain)

Wayne County Schools 21st Century Instructional Lesson Plan
Decimals And Fractions

NAME:	Subject: Math
Date:	Grade Level (s): 6

Standards/Objectives Addressed (NCSCOS)

1.03
Compare and order rational numbers.

Essential Question(s) (In student-friendly terms)

Today you learned (have learned) how to change fractions into decimals and decimals into fractions. Which process do you find to be the easiest? (Explain)

Assess (Look at student data to plan. Use formative and/or summative assessments.)

Review one and 2 digit divisors and the concept that division and fractions are the same thing. Students need to understand place value of decimals 100ths and 1000ths.

High Yield Instructional Strategies (check all that apply to the lesson)

Identifying similarities and differences	✓	Reinforcing effort and providing recognition	✓	Nonlinguistic representation	✓	Setting objectives and providing feedback	✓
Questions, cues, and advance organizers	✓	Summarizing and note taking	✓	Cooperative learning	✓	Generating and testing hypotheses	
Homework and practice	✓						

Learner Diversity

- **How will you differentiate to meet the needs of all learners in your class?**

504 modifications ET and RA. Additional student and teacher modeling, paired learning groups, and concrete representations will help to guide all students to reach expected outcomes. Differentiated assignments and practice will focus on remediation and enrichment of lower and higher ability groups.

Engage (Anticipatory Set)

- **Capture the students' attention, stimulate their thinking and help them access prior knowledge. Consider novelty, meaning and emotion.**

Sometimes you will need to change fractions into decimals so that you can use the base 10 system to work with them. Other times you will need to turn decimals into fractions so that you can compare and order them. Today we will be learning how to turn decimals into fractions and fractions into decimals.

Instructional Practices Used in this Lesson

Coaching	✓	**Providing Directions/ Instructions**	✓	**Learning Centers**	
Discussion	✓	**Providing opportunities for practice**	✓	**Teacher-directed Questions and Answers**	✓
Hands-on experiences	✓	**Direct Instruction**	✓	**Modeling**	✓
Presentation	✓	**Testing**		Other: Math6.org	✓

Suggested brained-based learning activities promoting the above Instructional Practices					
Think-Pair-Share	✓	Instructional Games		Music/Rhyme/Rhythm/Rap	✓
Thinking Maps	✓	Student Facilitators		Movement	
Technology Integration	✓	Storytelling		Humor	
Use of visuals	✓	Field Trips(Virtual)		Project/Problem- Based Learning	
Metaphor/Simile/Analogy		Reciprocal Teaching		Mnemonics	
Peer/Self Assessment	✓	Drawing or illustrating		Other:	
Writing/Reflecting/Journals	✓	Simulations/Role Play		Other: Math6.org	✓

Type(s) of Grouping Used:

___small group _✓_student pairs _✓_whole group _✓_individual

Explain, Explore, Elaborate

Content Chunks: How will you divide and teach the content?

- **Transitions should be used every 5-15 minutes to keep the students' brains engaged.**
- **Involve students in an analysis of their explorations.**
- **Use reflective activities to clarify and modify student understanding.**
- **Give students time to think, plan, investigate and organize collected information.**
- **Give students the opportunity to expand and solidify their understanding of the concept and/or apply it to a real-world situation.**

See next page for instructional detail.

Evaluate (Feedback/Closure)

- **Evaluate throughout the lesson. Are students able to answer the Essential Question(s)?**
- **Present students with a scoring guide (such as a rubric) at the beginning to self-assess.**
- **What assessment(s) will be used to be sure the students are successful?**

"Repeating decimals" is a brand new concept for 6th grade students. Think of a slogan to let the student know that they can quit dividing when the number begins to repeat. Then make a poster, brochure or other presentation that will help your classmates see how a repeating decimal is found.

Describe, Analyze, Reflect:

- **How effective was the lesson? How did the strategies help the students deepen their understanding? Cite evidence of student work, performance, behaviors, and/or remarks to support your view.**
- **What caused the lesson to go well? What challenges did you encounter?**
- **What did you do to contribute to the lesson's effectiveness?**
- **What learning did you take from this lesson to apply to future lessons? What would you do differently next time?**

Date: _____ Time Frame: **80 minutes**

Decimals And Fractions

Essential Question: Today you learned (have learned) how to change fractions into decimals and decimals into fractions. Which process do you find to be the easiest? (Explain)

Objective (s) Numbers: **1.03**

Outcomes: Compare and order rational numbers.

Materials: Textbook pages 166-170

Anticipatory Set: Today we will be learning how to turn decimals into fractions and fractions into decimals.

During the Lesson

Presentation of Information:

Integration of Other Subjects: Writing (persuasion)
Reading (vocabulary, problem solving, analyzing expectation)

Integration of Reading: Reading for information and interpretation.

Integration of Technology: Computer, Projector, PowerPoint, Internet

Modeling: Sometimes you will need to change fractions into decimals so that you can use the base 10 system to work with them. Other times you will need to turn decimals into fractions so that you can compare and order them.

Differentiation: 504 modifications ET and RA. Additional student and teacher modeling will help to guide all students to reach expected outcomes.

Guided Practice: Use a 4x4. Model changing decimals into fractions. {0.04 ; 2.8 ; 0.75 ; 3.44444} Use a 4x4. Model changing fractions into decimals. {5/8 ; 3/9 ; 7/5 ; 22/3} Pay special attention to repeating decimals and how to find their fraction equivalence. {0.333 ; 0.111}

After the Lesson

Independent Practice: Text page 169-170 {1–8, 12–27, 54–61}
AIG: {12–27, 34–41, 50–61}
Assign workbook page 4.4

Closure / Assessment: "Repeating decimals" is a brand new concept for 6th grade students. Think of a slogan to let the student know that they can quit dividing when the number begins to repeat. Then make a poster, brochure or other presentation that will help your classmates see how a repeating decimal is found.

Integration with School-wide Focus: Improve mathematics computation and problem solving.

Related Math6.org Activities: There are **9** activities connected with this lesson
Fractions to Decimals Lesson
Fractions to Decimals Guided Practice
**Let's Eat!

Math Objectives

1.03

Compare and order rational numbers.

Essential Question

You will be (were) shown 2 ways to reduce fractions to lowest terms. Which of the 2 ways were you taught last year? Which way do you think you will want to use in the future? (Explain)

Wayne County Schools 21st Century Instructional Lesson Plan
Equivalent Fractions

NAME:	Subject: Math
Date:	Grade Level (s): 6

Standards/Objectives Addressed (NCSCOS)

1.03
Compare and order rational numbers.

Essential Question(s) (In student-friendly terms)

You will be (were) shown 2 ways to reduce fractions to lowest terms. Which of the 2 ways were you taught last year? Which way do you think you will want to use in the future? (Explain)

Assess (Look at student data to plan. Use formative and/or summative assessments.)

Simplest form requires mastery of divisibility rules. Assess and analyze student strengths and weaknesses regarding divisibility rules and prime factorization.

High Yield Instructional Strategies (check all that apply to the lesson)

Identifying similarities and differences	✓	Reinforcing effort and providing recognition	✓	Nonlinguistic representation	✓	Setting objectives and providing feedback	✓
Questions, cues, and advance organizers	✓	Summarizing and note taking	✓	Cooperative learning	✓	Generating and testing hypotheses	
Homework and practice	✓						

Learner Diversity

- **How will you differentiate to meet the needs of all learners in your class?**

504 modifications ET and RA. Additional student and teacher modeling, paired learning groups, and concrete representations will help to guide all students to reach expected outcomes. Differentiated assignments and practice will focus on remediation and enrichment of lower and higher ability groups.

Engage (Anticipatory Set)

- **Capture the students' attention, stimulate their thinking and help them access prior knowledge. Consider novelty, meaning and emotion.**

(Tell the story of Numberville) Equivalent fractions are important for adding and subtracting fractions as well as any communication of fractions. Simplest form is the standard format for fractions because when simplest form is used - everybody gets the same answer. Today we will learn how to create equivalent fractions and find the simplest form of a fraction.

Instructional Practices Used in this Lesson

Coaching	✓	**Providing Directions/ Instructions**	✓	**Learning Centers**	
Discussion	✓	**Providing opportunities for practice**	✓	**Teacher-directed Questions and Answers**	✓
Hands-on experiences	✓	**Direct Instruction**	✓	**Modeling**	✓
Presentation	✓	**Testing**		Other: Math6.org	✓

Suggested brained-based learning activities promoting the above Instructional Practices					
Think-Pair-Share	✓	Instructional Games		Music/Rhyme/Rhythm/Rap	
Thinking Maps	✓	Student Facilitators		Movement	
Technology Integration	✓	Storytelling	✓	Humor	
Use of visuals	✓	Field Trips(Virtual)		Project/Problem- Based Learning	
Metaphor/Simile/Analogy		Reciprocal Teaching		Mnemonics	
Peer/Self Assessment	✓	Drawing or illustrating		Other:	
Writing/Reflecting/Journals	✓	Simulations/Role Play		Other: Math6.org	✓

Type(s) of Grouping Used:
___small group _✓_student pairs _✓_whole group _✓_individual

Explain, Explore, Elaborate
Content Chunks: How will you divide and teach the content?

- **Transitions should be used every 5-15 minutes to keep the students' brains engaged.**
- **Involve students in an analysis of their explorations.**
- **Use reflective activities to clarify and modify student understanding.**
- **Give students time to think, plan, investigate and organize collected information.**
- **Give students the opportunity to expand and solidify their understanding of the concept and/or apply it to a real-world situation.**

See next page for instructional detail.

Evaluate (Feedback/Closure)

- **Evaluate throughout the lesson. Are students able to answer the Essential Question(s)?**
- **Present students with a scoring guide (such as a rubric) at the beginning to self-assess.**
- **What assessment(s) will be used to be sure the students are successful?**

Today's extension @ Math6.org will teach you an advanced but important and fairly easy to do concept called extrapolations. I would like you to complete this extension. OR create a 4x4 that models simplifying the following 4 fractions. {36/48 ; 27/63 ; 18/24 and 125/600}

Describe, Analyze, Reflect:

- **How effective was the lesson? How did the strategies help the students deepen their understanding? Cite evidence of student work, performance, behaviors, and/or remarks to support your view.**
- **What caused the lesson to go well? What challenges did you encounter?**
- **What did you do to contribute to the lesson's effectiveness?**
- **What learning did you take from this lesson to apply to future lessons? What would you do differently next time?**

Date: _____ Time Frame: **80 minutes**

Equivalent Fractions

Essential Question: You will be (were) shown 2 ways to reduce fractions to lowest terms. Which of the 2 ways were you taught last year? Which way do you think you will want to use in the future? (Explain)

Objective (s) Numbers: **1.03**

Outcomes: Compare and order rational numbers.

Materials: Textbook pages 171-175

Anticipatory Set: Today we will learn how to create equivalent fractions and find the simplest form of a fraction.

During the Lesson

Presentation of Information:

Integration of Other Subjects: Writing (sequencing)
Reading (vocabulary, problem solving, analyzing expectation)

Integration of Reading: Reading for information and interpretation.

Integration of Technology: Computer, Projector, PowerPoint, Internet

Modeling: (Tell the story of numberville) Equivalent fractions are important for adding and subtracting fractions as well as any communication of fractions. Simplest form is the standard format for fractions because when simplest form is used - everybody gets the same answer.

Differentiation: 504 modifications ET and RA. Additional student and teacher modeling will help to guide all students to reach expected outcomes.

Guided Practice: Use a 4x4. Model creating equivalent fractions with multiplication and division. {12/15 ; 4/8 ; 16/36} **Part 2** Use a 4x4. Model using multiplication or division to find missing numbers that make equivalent fractions. {3/8 = ?/40 ; ?/5 = 12/15 ; 6/7 = 48/? ; 3/? = 15/25} **Part 3** Use a 4x4. Model finding the simplest form. {18/24 ; 36/50 ; 75/100}

After the Lesson

Independent Practice: Text page 174-175 {1–4, 12–19, 44–53}
AIG: {16–19, 34–38, 41–53}
Assign workbook page 4.5

Closure / Assessment: Today's extension @ Math6.org will teach you an advanced but important and fairly easy to do concept called extrapolations. I would like you to complete this extension. OR create a 4x4 that models simplifying the following 4 fractions. {36/48 ; 27/63 ; 18/24 and 125/600}

Integration with School-wide Focus: Improve mathematics computation and problem solving.

Related Math6.org Activities: There are **13** activities connected with this lesson

Common Style GP	Reducing Fractions Lesson	**Extrapolations
Stoney Method GP	Reducing Fractions Guided Practice	
Equivalent Fractions Quiz	Lowest Terms Quiz	

Math Objectives

1.03

Compare and order rational numbers.

Essential Question

During the next month, you will learn the many skills needed to work with and understand fractions. During this time you are to consider the following: All decimals are fractions with the common denominator as a power of 10. Students and adults have a much easier time understanding the value of a fraction when it is represented as a decimal. Almost all calculators convert fractions to decimals in order to compute then convert the decimal back to a fraction to report the answer. If all of these things are true, would you vote to eliminate fractions and require all fractions to be decimals or keep fractions and have people learn the skills necessary to use them? (Explain - Keep a daily diary to track your current thoughts and see when, if and how often you change your mind)

Wayne County Schools 21st Century Instructional Lesson Plan
Comparing and Ordering Fractions

NAME:	Subject: Math
Date:	Grade Level (s): 6

Standards/Objectives Addressed (NCSCOS)

1.03
Compare and order rational numbers.

Essential Question(s) (In student-friendly terms)

During the next month, you will learn the many skills needed to work with and understand fractions. During this time you are to consider the following: All decimals are fractions with the common denominator as a power of 10. Students and adults have a much easier time understanding the value of a fraction when it is represented as a decimal. Almost all calculators convert fractions to decimals in order to compute then convert the decimal back to a fraction to report the answer. If all of these things are true, would you vote to eliminate fractions and require all fractions to be decimals or keep fractions and have people learn the skills necessary to use them? (Explain - Keep a daily diary to track your current thoughts and see when, if and how often you change your mind)

Assess (Look at student data to plan. Use formative and/or summative assessments.)

Students need to be masters of the multiplication facts to make this foundation skill simple and quick. Assess student mastery of multiplication facts and provide opportunities to practice the facts through multiplying whole numbers and decimals.

High Yield Instructional Strategies (check all that apply to the lesson)

Identifying similarities and differences	✓	Reinforcing effort and providing recognition	✓	Nonlinguistic representation	✓	Setting objectives and providing feedback	✓
Questions, cues, and advance organizers	✓	Summarizing and note taking	✓	Cooperative learning	✓	Generating and testing hypotheses	
Homework and practice	✓						

Learner Diversity

- **How will you differentiate to meet the needs of all learners in your class?**

504 modifications ET and RA. Additional student and teacher modeling, paired learning groups, and concrete representations will help to guide all students to reach expected outcomes. Differentiated assignments and practice will focus on remediation and enrichment of lower and higher ability groups.

Engage (Anticipatory Set)

- **Capture the students' attention, stimulate their thinking and help them access prior knowledge. Consider novelty, meaning and emotion.**

Tell the "Stoney Method" story. Today we will learn a very easy method for comparing and ordering fractions.

Instructional Practices Used in this Lesson

Coaching	✓	**Providing Directions/ Instructions**	✓	**Learning Centers**	
Discussion	✓	**Providing opportunities for practice**	✓	**Teacher-directed Questions and Answers**	✓
Hands-on experiences	✓	**Direct Instruction**	✓	**Modeling**	✓
Presentation	✓	**Testing**		Other: Math6.org	✓

Suggested brained-based learning activities promoting the above Instructional Practices					
Think-Pair-Share	✓	Instructional Games		Music/Rhyme/Rhythm/Rap	
Thinking Maps	✓	Student Facilitators		Movement	
Technology Integration	✓	Storytelling	✓	Humor	
Use of visuals	✓	Field Trips(Virtual)		Project/Problem- Based Learning	
Metaphor/Simile/Analogy		Reciprocal Teaching		Mnemonics	
Peer/Self Assessment	✓	Drawing or illustrating		Other:	
Writing/Reflecting/Journals	✓	Simulations/Role Play		Other: Math6.org	✓

Type(s) of Grouping Used:
___small group _✓_student pairs _✓_whole group _✓_individual

Explain, Explore, Elaborate
Content Chunks: How will you divide and teach the content?

- **Transitions should be used every 5-15 minutes to keep the students' brains engaged.**
- **Involve students in an analysis of their explorations.**
- **Use reflective activities to clarify and modify student understanding.**
- **Give students time to think, plan, investigate and organize collected information.**
- **Give students the opportunity to expand and solidify their understanding of the concept and/or apply it to a real-world situation.**

See next page for instructional detail.

Evaluate (Feedback/Closure)

- **Evaluate throughout the lesson. Are students able to answer the Essential Question(s)?**
- **Present students with a scoring guide (such as a rubric) at the beginning to self-assess.**
- **What assessment(s) will be used to be sure the students are successful?**

Today's extension @ Math6.org will teach you how to use Microsoft Excel to sort data (put them in order). Complete this extension or explain how you would determine whether 15/51 and 3/17 are equivalent fractions.

Describe, Analyze, Reflect:

- **How effective was the lesson? How did the strategies help the students deepen their understanding? Cite evidence of student work, performance, behaviors, and/or remarks to support your view.**
- **What caused the lesson to go well? What challenges did you encounter?**
- **What did you do to contribute to the lesson's effectiveness?**
- **What learning did you take from this lesson to apply to future lessons? What would you do differently next time?**

Date: _____ Time Frame: **80 minutes**

Comparing and Ordering Fractions

Essential Question: During the next month, you will learn the many skills needed to work with and understand fractions. During this time you are to consider the following: All decimals are fractions with the common denominator as a power of 10. Students and adults have a much easier time understanding the value of a fraction when it is represented as a decimal. Almost all calculators convert fractions to decimals in order to compute then convert the decimal back to a fraction to report the answer. If all of these things are true, would you vote to eliminate fractions and require all fractions to be decimals or keep fractions and have people learn the skills necessary to use them? (Explain - Keep a daily diary to track your current thoughts and see when, if and how often you change your mind)

Objective (s) Numbers: **1.03**
Outcomes: Compare and order rational numbers.
Materials: Textbook pages 176-181; Fraction Strips
Anticipatory Set: Today we will learn a very easy method for comparing and ordering fractions.

During the Lesson

Presentation of Information:
Integration of Other Subjects: Writing (sequencing)
Reading (vocabulary, problem solving, analyzing expectation)
Integration of Reading: Reading for information and interpretation.
Integration of Technology: Computer, Projector, PowerPoint, Internet

Modeling: Model comparing fractions using fraction strips (attached).

Differentiation: 504 modifications ET and RA. Additional student and teacher modeling will help to guide all students to reach expected outcomes.

Guided Practice: Model comparing fractions using cross multiplication. {2/3 and 3/7 ; 6/6 and 8/8 ; 11/3 and 13/4 ; 9/25 and 11/30} **Part 2-** Model ordering fractions by changing them into decimals. {2/3, 1/5, 6/4, 3/4 ; 4/9, 4/5, 1/2, 5/12 ; 1.3, 1 3/5, 1 1/2, 1 6/11}

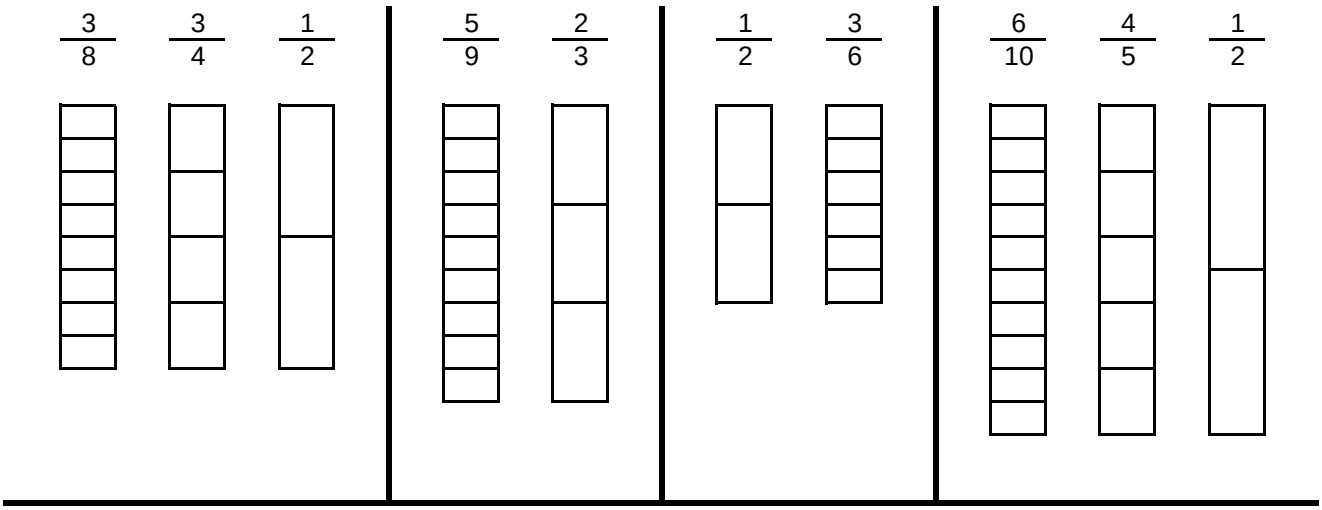
After the Lesson

Independent Practice: Text page 180-181 {1–20, 33, 35, 39–53}
AIG: {21–53}
Assign workbook page 4.6

Closure / Assessment: Today's extension @ Math6.org will teach you how to use Microsoft Excel to sort data (put them in order). Complete this extension or explain how you would determine whether 15/51 and 3/17 are equivalent fractions.

Integration with School-wide Focus: Improve mathematics computation and problem solving.

Related Math6.org Activities: There are **7** activities connected with this lesson
Compare Fractions Guided Practice
Ordering Fractions Guided Practice
**Sort Data with Excel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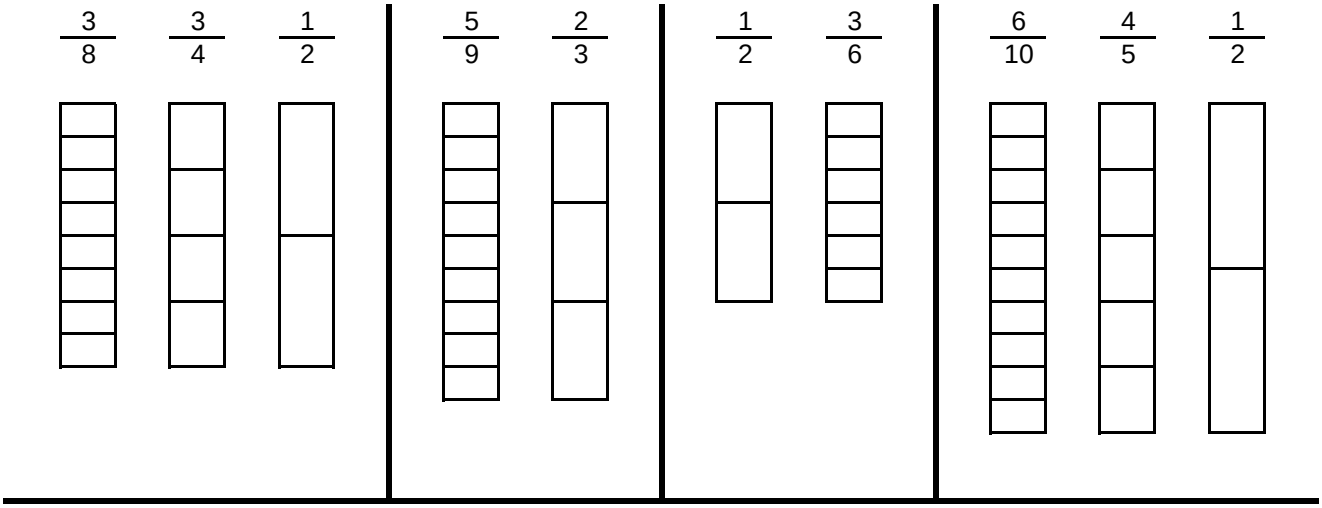
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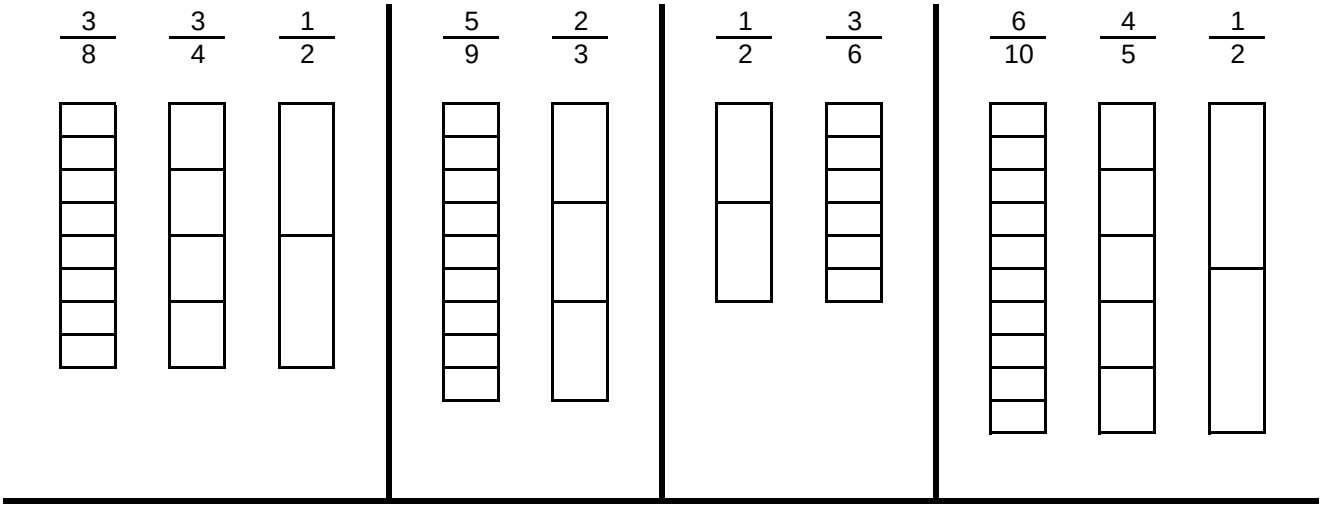
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Math Objectives

1.03

Compare and order rational numbers.

Essential Question

During the next month, you will learn the many skills needed to work with and understand fractions. During this time you are to consider the following: All decimals are fractions with the common denominator as a power of 10. Students and adults have a much easier time understanding the value of a fraction when it is represented as a decimal. Almost all calculators convert fractions to decimals in order to compute then convert the decimal back to a fraction to report the answer. If all of these things are true, would you vote to eliminate fractions and require all fractions to be decimals or keep fractions and have people learn the skills necessary to use them? (Explain - Keep a daily diary to track your current thoughts and see when, if and how often you change your mind)

Wayne County Schools 21st Century Instructional Lesson Plan
Mixed Numbers and Improper Fractions

NAME:	Subject: Math
Date:	Grade Level (s): 6

Standards/Objectives Addressed (NCSCOS)

1.03
Compare and order rational numbers.

Essential Question(s) (In student-friendly terms)

During the next month, you will learn the many skills needed to work with and understand fractions. During this time you are to consider the following: All decimals are fractions with the common denominator as a power of 10. Students and adults have a much easier time understanding the value of a fraction when it is represented as a decimal. Almost all calculators convert fractions to decimals in order to compute then convert the decimal back to a fraction to report the answer. If all of these things are true, would you vote to eliminate fractions and require all fractions to be decimals or keep fractions and have people learn the skills necessary to use them? (Explain - Keep a daily diary to track your current thoughts and see when, if and how often you change your mind)

Assess (Look at student data to plan. Use formative and/or summative assessments.)

Students need to be masters of prime factorization to make this skill simple and quick. Assess student mastery of prime factorization and provide opportunities to practice the facts through prime factorization drills and exercises.

High Yield Instructional Strategies (check all that apply to the lesson)

Identifying similarities and differences	✓	Reinforcing effort and providing recognition	✓	Nonlinguistic representation	✓	Setting objectives and providing feedback	✓
Questions, cues, and advance organizers	✓	Summarizing and note taking	✓	Cooperative learning	✓	Generating and testing hypotheses	
Homework and practice	✓						

Learner Diversity

- **How will you differentiate to meet the needs of all learners in your class?**

504 modifications ET and RA. Additional student and teacher modeling, paired learning groups, and concrete representations will help to guide all students to reach expected outcomes. Differentiated assignments and practice will focus on remediation and enrichment of lower and higher ability groups.

Engage (Anticipatory Set)

- **Capture the students' attention, stimulate their thinking and help them access prior knowledge. Consider novelty, meaning and emotion.**

Today we will work learn how to make improper fractions into mixed numbers and mixed numbers into improper fractions.

Instructional Practices Used in this Lesson

Coaching	✓	**Providing Directions/ Instructions**	✓	**Learning Centers**	
Discussion	✓	**Providing opportunities for practice**	✓	**Teacher-directed Questions and Answers**	✓
Hands-on experiences	✓	**Direct Instruction**	✓	**Modeling**	✓
Presentation	✓	**Testing**		Other: Math6.org	✓

Suggested brained-based learning activities promoting the above Instructional Practices					
Think-Pair-Share	✓	Instructional Games		Music/Rhyme/Rhythm/Rap	
Thinking Maps	✓	Student Facilitators		Movement	
Technology Integration	✓	Storytelling		Humor	
Use of visuals	✓	Field Trips(Virtual)		Project/Problem- Based Learning	
Metaphor/Simile/Analogy		Reciprocal Teaching		Mnemonics	
Peer/Self Assessment	✓	Drawing or illustrating		Other:	
Writing/Reflecting/Journals	✓	Simulations/Role Play		Other: Math6.org	✓

Type(s) of Grouping Used:
___small group _✓_student pairs _✓_whole group _✓_individual

Explain, Explore, Elaborate
Content Chunks: How will you divide and teach the content?

- **Transitions should be used every 5-15 minutes to keep the students' brains engaged.**
- **Involve students in an analysis of their explorations.**
- **Use reflective activities to clarify and modify student understanding.**
- **Give students time to think, plan, investigate and organize collected information.**
- **Give students the opportunity to expand and solidify their understanding of the concept and/or apply it to a real-world situation.**

See next page for instructional detail.

Evaluate (Feedback/Closure)

- **Evaluate throughout the lesson. Are students able to answer the Essential Question(s)?**
- **Present students with a scoring guide (such as a rubric) at the beginning to self-assess.**
- **What assessment(s) will be used to be sure the students are successful?**

Create a flow map that explains how to change 12 3/5 into an improper fraction. Then write a "How To" paragraph to communicate the process.

Describe, Analyze, Reflect:

- **How effective was the lesson? How did the strategies help the students deepen their understanding? Cite evidence of student work, performance, behaviors, and/or remarks to support your view.**
- **What caused the lesson to go well? What challenges did you encounter?**
- **What did you do to contribute to the lesson's effectiveness?**
- **What learning did you take from this lesson to apply to future lessons? What would you do differently next time?**

Date: _____ Time Frame: **80 minutes**

Mixed Numbers and Improper Fractions

Essential Question: During the next month, you will learn the many skills needed to work with and understand fractions. During this time you are to consider the following: All decimals are fractions with the common denominator as a power of 10. Students and adults have a much easier time understanding the value of a fraction when it is represented as a decimal. Almost all calculators convert fractions to decimals in order to compute then convert the decimal back to a fraction to report the answer. If all of these things are true, would you vote to eliminate fractions and require all fractions to be decimals or keep fractions and have people learn the skills necessary to use them? (Explain - Keep a daily diary to track your current thoughts and see when, if and how often you change your mind)

Objective (s) Numbers: **1.03**

Outcomes: Compare and order rational numbers.

Materials: Textbook pages 182-187; Drills

Anticipatory Set: Today we will work learn how to make improper fractions into mixed numbers and mixed numbers into improper fractions.

During the Lesson

Presentation of Information:

Integration of Other Subjects: Writing (sequencing)
Reading (vocabulary, problem solving, analyzing expectation)

Integration of Reading: Reading for information and interpretation.

Integration of Technology: Computer, Projector, PowerPoint, Internet

Modeling: Mixed Numbers are the simplest form of improper fractions. We often use improper fractions to complete fraction calculations and then need to simplify them to mixed numbers. Another example of an improper fraction is division problems. If you have 48 students to divide into 5 groups, then you have an improper fraction (48/5) that needs to be changed into an improper fraction.

Differentiation: 504 modifications ET and RA. Additional student and teacher modeling will help to guide all students to reach expected outcomes.

Guided Practice: Use a 4x4 to model changing improper fractions into mixed numbers {13/4 ; 88/9 ; 144/7} Use a 4x4 to model changing mixed numbers into improper fractions {7 1/2 ; 6 2/3 ; 3 5/8}

After the Lesson

Independent Practice: Text page 184-185 {1, 6–7, 40, 42, 48–56}
AIG: {6–7, 45–46, 48–56}
Assign workbook page 4.7

Closure / Assessment: Create a flow map that explains how to change 12 3/5 into an improper fraction. Then write a "How To" paragraph to communicate the process.

Integration with School-wide Focus: Improve mathematics computation and problem solving.

Related Math6.org Activities: There are **9** activities connected with this lesson

Mixed Numbers Guided Practice
Mixed Numbers Drill
Improper Fractions Guided Practice
Improper Fractions Drill
**Negotiate the Mine Field

Name _____
A – Change to Improper Fractions

_____= $6\frac{5}{6}$

_____= $8\frac{1}{2}$

_____= $7\frac{5}{8}$

_____= $4\frac{5}{9}$

_____= $10\frac{1}{5}$

_____= $6\frac{1}{3}$

_____= $6\frac{3}{4}$

_____= 2

_____= $9\frac{5}{7}$

_____= $3\frac{5}{9}$

_____= $3\frac{4}{5}$

_____= $4\frac{5}{6}$

Name _____
B – Change to Improper Fractions

_____= $7\frac{3}{4}$

_____= $5\frac{5}{6}$

_____= $9\frac{7}{8}$

_____= 7

_____= $8\frac{2}{7}$

_____= $5\frac{4}{7}$

_____= $4\frac{3}{8}$

_____= $8\frac{1}{6}$

_____= $5\frac{5}{8}$

_____= $6\frac{1}{7}$

_____= $7\frac{1}{4}$

_____= $7\frac{7}{8}$

Name _____
C – Change to Improper Fractions

_____= $4\frac{2}{5}$

_____= $10\frac{1}{2}$

_____= $3\frac{2}{9}$

_____= $4\frac{1}{6}$

_____= $3\frac{3}{8}$

_____= $8\frac{5}{7}$

_____= $4\frac{7}{8}$

_____= $9\frac{1}{6}$

_____= $8\frac{3}{7}$

_____= 3

_____= $9\frac{1}{3}$

_____= $5\frac{1}{4}$

Name _____
D – Change to Improper Fractions

_____= $7\frac{1}{8}$

_____= $7\frac{5}{6}$

_____= 5

_____= $5\frac{3}{4}$

_____= $5\frac{1}{2}$

_____= $5\frac{6}{7}$

_____= $6\frac{1}{6}$

_____= 9

_____= $6\frac{1}{4}$

_____= $7\frac{1}{6}$

_____= $4\frac{5}{8}$

_____= $1\frac{5}{6}$

Mixed# A	Mixed# B	Mixed# C	Mixed# D
$41/6$	$31/4$	$22/5$	$57/8$
$17/2$	$35/6$	$21/2$	$61/6$
$61/8$	$79/8$	$29/9$	$5/1$
$41/9$	$7/1$	$25/6$	$23/4$
$51/5$	$58/7$	$27/8$	$11/2$
$19/3$	$39/7$	$61/7$	$41/7$
$27/4$	$35/8$	$39/8$	$37/6$
$2/1$	$49/6$	$55/6$	$9/1$
$68/7$	$45/8$	$59/7$	$25/4$
$32/9$	$43/7$	$3/1$	$43/6$
$19/5$	$29/4$	$28/3$	$37/8$
$29/6$	$63/8$	$21/4$	$11/6$

Name _____
A – Change to Mixed Number

$^{23}/_{4}$ = _____

$^{55}/_{6}$ = _____

$^{41}/_{6}$ = _____

$^{31}/_{4}$ = _____

$^{29}/_{9}$ = _____

$^{25}/_{6}$ = _____

$^{27}/_{4}$ = _____

$^{68}/_{7}$ = _____

$^{39}/_{7}$ = _____

$^{37}/_{8}$ = _____

$^{47}/_{6}$ = _____

$^{59}/_{7}$ = _____

Prime Factorization

_____102

_____124

Name _____
B – Change to Mixed Number

$^{21}/_{7}$ = _____

$^{25}/_{6}$ = _____

$^{63}/_{8}$ = _____

$^{29}/_{9}$ = _____

$^{43}/_{6}$ = _____

$^{55}/_{6}$ = _____

$^{23}/_{4}$ = _____

$^{19}/_{5}$ = _____

$^{59}/_{7}$ = _____

$^{49}/_{6}$ = _____

$^{37}/_{8}$ = _____

$^{39}/_{7}$ = _____

Greatest Common Factor

_____14, 22

_____24, 36

Name _____
C – Change to Mixed Number

$^{79}/_{8}$ = _____

$^{61}/_{8}$ = _____

$^{27}/_{4}$ = _____

$^{45}/_{8}$ = _____

$^{41}/_{6}$ = _____

$^{51}/_{6}$ = _____

$^{21}/_{4}$ = _____

$^{19}/_{3}$ = _____

$^{58}/_{7}$ = _____

$^{43}/_{6}$ = _____

$^{41}/_{9}$ = _____

$^{38}/_{7}$ = _____

Least Common Multiple

_____ = 18, 20

_____ = 6, 8, 10

Name _____
D – Change to Mixed Number

$^{57}/_{8}$ = _____

$^{63}/_{6}$ = _____

$^{22}/_{5}$ = _____

$^{39}/_{8}$ = _____

$^{51}/_{5}$ = _____

$^{11}/_{2}$ = _____

$^{22}/_{3}$ = _____

$^{27}/_{8}$ = _____

$^{54}/_{6}$ = _____

$^{28}/_{3}$ = _____

$^{43}/_{7}$ = _____

$^{11}/_{6}$ = _____

Mixed# A	Mixed# B	Mixed# C	Mixed# D
$5\ ^{3}/_{4}$	3	$9\ ^{7}/_{8}$	$7\ ^{1}/_{8}$
$9\ ^{1}/_{6}$	$4\ ^{1}/_{6}$	$7\ ^{5}/_{8}$	$10\ ^{1}/_{2}$
$6\ ^{5}/_{6}$	$7\ ^{7}/_{8}$	$6\ ^{3}/_{4}$	$4\ ^{2}/_{5}$
$7\ ^{3}/_{4}$	$3\ ^{2}/_{9}$	$5\ ^{5}/_{8}$	$4\ ^{7}/_{8}$
$3\ ^{2}/_{9}$	$7\ ^{1}/_{6}$	$6\ ^{5}/_{6}$	$10\ ^{1}/_{5}$
$4\ ^{1}/_{6}$	$9\ ^{1}/_{6}$	$8\ ^{1}/_{2}$	$5\ ^{1}/_{2}$
$6\ ^{3}/_{4}$	$5\ ^{3}/_{4}$	$5\ ^{1}/_{4}$	$7\ ^{1}/_{3}$
$9\ ^{5}/_{7}$	$3\ ^{4}/_{5}$	$6\ ^{1}/_{3}$	$3\ ^{3}/_{8}$
$5\ ^{4}/_{7}$	$8\ ^{3}/_{7}$	$8\ ^{2}/_{7}$	9
$4\ ^{5}/_{8}$	$8\ ^{1}/_{6}$	$7\ ^{1}/_{6}$	$9\ ^{1}/_{3}$
$7\ ^{5}/_{6}$	$4\ ^{5}/_{8}$	$4\ ^{5}/_{9}$	$6\ ^{1}/_{7}$
$8\ ^{3}/_{7}$	$5\ ^{4}/_{7}$	$5\ ^{3}/_{7}$	$1\ ^{5}/_{6}$

Prime Factorization	Greatest Common Factor	Least Common Multiple
17*3*2	2	180
$31*2^{2}$	12	120

Math Objectives

1.04a

Analyze computational strategies

Essential Question

During the next month, you will learn the many skills needed to work with and understand fractions. During this time you are to consider the following: All decimals are fractions with the common denominator as a power of 10. Students and adults have a much easier time understanding the value of a fraction when it is represented as a decimal. Almost all calculators convert fractions to decimals in order to compute then convert the decimal back to a fraction to report the answer. If all of these things are true, would you vote to eliminate fractions and require all fractions to be decimals or keep fractions and have people learn the skills necessary to use them? (Explain - Keep a daily diary to track your current thoughts and see when, if and how often you change your mind)

Wayne County Schools 21st Century Instructional Lesson Plan
Adding and Subtracting Fractions with Like Denominators

NAME:	Subject: Math
Date:	Grade Level (s): 6

Standards/Objectives Addressed (NCSCOS)

1.04a
Analyze computational strategies

Essential Question(s) (In student-friendly terms)

During the next month, you will learn the many skills needed to work with and understand fractions. During this time you are to consider the following: All decimals are fractions with the common denominator as a power of 10. Students and adults have a much easier time understanding the value of a fraction when it is represented as a decimal. Almost all calculators convert fractions to decimals in order to compute then convert the decimal back to a fraction to report the answer. If all of these things are true, would you vote to eliminate fractions and require all fractions to be decimals or keep fractions and have people learn the skills necessary to use them? (Explain - Keep a daily diary to track your current thoughts and see when, if and how often you change your mind)

Assess (Look at student data to plan. Use formative and/or summative assessments.)

Students need to show an understanding of how to write 1 as a fraction in multiple forms. Refresh and review this concept prior to attempting this lesson.

High Yield Instructional Strategies (check all that apply to the lesson)

Identifying similarities and differences	✓	Reinforcing effort and providing recognition	✓	Nonlinguistic representation	✓	Setting objectives and providing feedback	✓
Questions, cues, and advance organizers	✓	Summarizing and note taking	✓	Cooperative learning	✓	Generating and testing hypotheses	
Homework and practice	✓						

Learner Diversity

- **How will you differentiate to meet the needs of all learners in your class?**

504 modifications ET and RA. Additional student and teacher modeling, paired learning groups, and concrete representations will help to guide all students to reach expected outcomes. Differentiated assignments and practice will focus on remediation and enrichment of lower and higher ability groups.

Engage (Anticipatory Set)

- **Capture the students' attention, stimulate their thinking and help them access prior knowledge. Consider novelty, meaning and emotion.**

Today we will learn how to add and subtract fractions with like denominators.

Instructional Practices Used in this Lesson

Coaching	✓	**Providing Directions/ Instructions**	✓	**Learning Centers**	
Discussion	✓	**Providing opportunities for practice**	✓	**Teacher-directed Questions and Answers**	✓
Hands-on experiences	✓	**Direct Instruction**	✓	**Modeling**	✓
Presentation	✓	**Testing**		Other: Math6.org	✓

Suggested brained-based learning activities promoting the above Instructional Practices					
Think-Pair-Share	✓	Instructional Games		Music/Rhyme/Rhythm/Rap	
Thinking Maps	✓	Student Facilitators		Movement	
Technology Integration	✓	Storytelling		Humor	
Use of visuals	✓	Field Trips(Virtual)		Project/Problem- Based Learning	
Metaphor/Simile/Analogy		Reciprocal Teaching		Mnemonics	
Peer/Self Assessment	✓	Drawing or illustrating		Other:	
Writing/Reflecting/Journals	✓	Simulations/Role Play		Other: Math6.org	✓

Type(s) of Grouping Used:
___small group _✓_student pairs _✓_whole group _✓_individual

Explain, Explore, Elaborate
Content Chunks: How will you divide and teach the content?

- **Transitions should be used every 5-15 minutes to keep the students' brains engaged.**
- **Involve students in an analysis of their explorations.**
- **Use reflective activities to clarify and modify student understanding.**
- **Give students time to think, plan, investigate and organize collected information.**
- **Give students the opportunity to expand and solidify their understanding of the concept and/or apply it to a real-world situation.**

See next page for instructional detail.

Evaluate (Feedback/Closure)

- **Evaluate throughout the lesson. Are students able to answer the Essential Question(s)?**
- **Present students with a scoring guide (such as a rubric) at the beginning to self-assess.**
- **What assessment(s) will be used to be sure the students are successful?**

When writing 1 as a fraction in a subtraction problem, how do you know what the numerator and denominator should be? Give an example.

Describe, Analyze, Reflect:

- **How effective was the lesson? How did the strategies help the students deepen their understanding? Cite evidence of student work, performance, behaviors, and/or remarks to support your view.**
- **What caused the lesson to go well? What challenges did you encounter?**
- **What did you do to contribute to the lesson's effectiveness?**
- **What learning did you take from this lesson to apply to future lessons? What would you do differently next time?**

Date: _____ Time Frame: **80 minutes**

Adding and Subtracting Fractions with Like Denominators

Essential Question: During the next month, you will learn the many skills needed to work with and understand fractions. During this time you are to consider the following: All decimals are fractions with the common denominator as a power of 10. Students and adults have a much easier time understanding the value of a fraction when it is represented as a decimal. Almost all calculators convert fractions to decimals in order to compute then convert the decimal back to a fraction to report the answer. If all of these things are true, would you vote to eliminate fractions and require all fractions to be decimals or keep fractions and have people learn the skills necessary to use them? (Explain - Keep a daily diary to track your current thoughts and see when, if and how often you change your mind)

Objective (s) Numbers: **1.04a**

Outcomes: Analyze computational strategies

Materials: Textbook pages 188-191; fraction strips

Anticipatory Set: Today we will learn how to add and subtract fractions with like denominators.

During the Lesson

Presentation of Information:

Integration of Other Subjects: Reading (vocabulary, problem solving, analyzing expectation)

Integration of Reading: Reading for information and interpretation.

Integration of Technology: Computer, Projector, PowerPoint, Internet

Modeling: Use Fraction Strips (attached) to Add and Subtract with Like Denominators (Reteaching 4.8)

Addition and Subtraction with Like Denominators
1. Make sure the denominators are the same
2. Compute (numerators only)
3. Simplify

Differentiation: 504 modifications ET and RA. Additional student and teacher modeling will help to guide all students to reach expected outcomes.

Guided Practice: Model the process with {3/4 + 3/4 ; 5/8 - 3/8 ; 1 - 5/6 }

After the Lesson

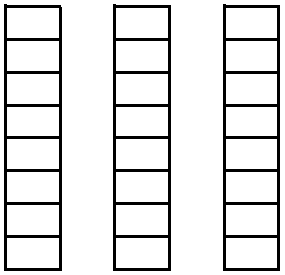
Independent Practice: Text page 190-191 {1–5, 10–14, 19–24, 34, 42–48}
AIG: {1–2, 4, 10–14 even, 19–27, 40–48}
Assign workbook page 4.8

Closure / Assessment: When writing 1 as a fraction in a subtraction problem, how do you know what the numerator and denominator should be? Give an example.

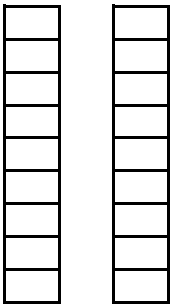
Integration with School-wide Focus: Improve mathematics computation and problem solving.

Related Math6.org Activities: There are **9** activities connected with this lesson
Simplify Fractions Lesson
Simplify Fractions Guided Practice
Simplify Fractions Drill
Like Denominators Guided Practice
**Easy on the EOG

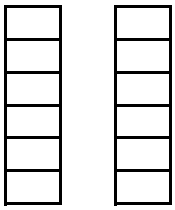
$\frac{3}{8} + \frac{3}{8} + \frac{3}{8}$



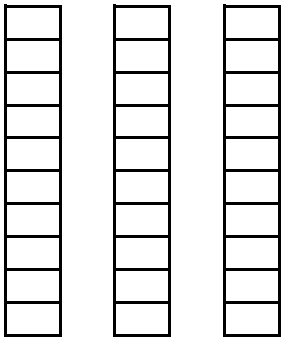
$\frac{5}{9} + \frac{4}{9}$



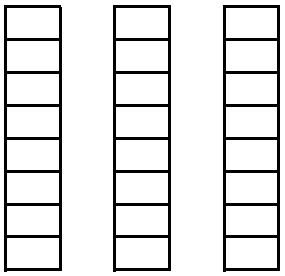
$\frac{5}{6} + \frac{5}{6}$



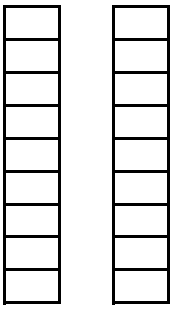
$\frac{7}{10} + \frac{9}{10} + \frac{3}{10}$



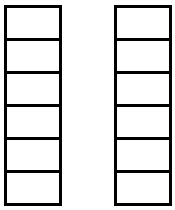
$\frac{3}{8} + \frac{3}{8} + \frac{3}{8}$



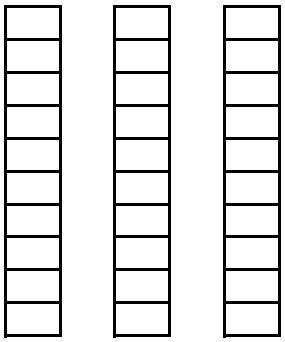
$\frac{5}{9} + \frac{4}{9}$



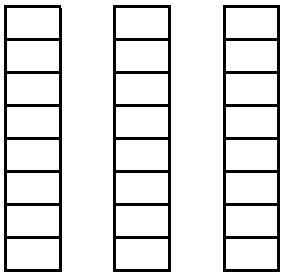
$\frac{5}{6} + \frac{5}{6}$



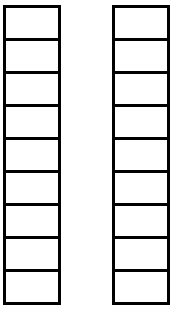
$\frac{7}{10} + \frac{9}{10} + \frac{3}{10}$



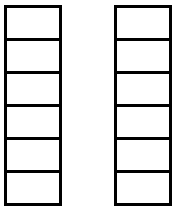
$\frac{3}{8} + \frac{3}{8} + \frac{3}{8}$



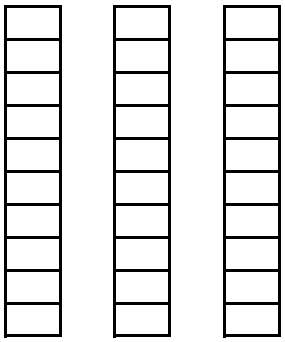
$\frac{5}{9} + \frac{4}{9}$



$\frac{5}{6} + \frac{5}{6}$



$\frac{7}{10} + \frac{9}{10} + \frac{3}{10}$



Math Objectives

1.04a

Analyze computational strategies

Essential Question

During the next month, you will learn the many skills needed to work with and understand fractions. During this time you are to consider the following: All decimals are fractions with the common denominator as a power of 10. Students and adults have a much easier time understanding the value of a fraction when it is represented as a decimal. Almost all calculators convert fractions to decimals in order to compute then convert the decimal back to a fraction to report the answer. If all of these things are true, would you vote to eliminate fractions and require all fractions to be decimals or keep fractions and have people learn the skills necessary to use them? (Explain - Keep a daily diary to track your current thoughts and see when, if and how often you change your mind)

Wayne County Schools 21st Century Instructional Lesson Plan
Multiplying Fractions by Whole Numbers

NAME:	**Subject: Math**
Date:	**Grade Level (s): 6**

Standards/Objectives Addressed (NCSCOS)

1.04a
Analyze computational strategies

Essential Question(s) (In student-friendly terms)

During the next month, you will learn the many skills needed to work with and understand fractions. During this time you are to consider the following: All decimals are fractions with the common denominator as a power of 10. Students and adults have a much easier time understanding the value of a fraction when it is represented as a decimal. Almost all calculators convert fractions to decimals in order to compute then convert the decimal back to a fraction to report the answer. If all of these things are true, would you vote to eliminate fractions and require all fractions to be decimals or keep fractions and have people learn the skills necessary to use them? (Explain - Keep a daily diary to track your current thoughts and see when, if and how often you change your mind)

Assess (Look at student data to plan. Use formative and/or summative assessments.)

Students need to apply their understanding of the Identity property of division. Review and refresh this concept prior to (or at the start of this lesson)

High Yield Instructional Strategies (check all that apply to the lesson)

Identifying similarities and differences	✓	Reinforcing effort and providing recognition	✓	Nonlinguistic representation	✓	Setting objectives and providing feedback	✓
Questions, cues, and advance organizers	✓	Summarizing and note taking	✓	Cooperative learning	✓	Generating and testing hypotheses	
Homework and practice	✓						

Learner Diversity

- **How will you differentiate to meet the needs of all learners in your class?**

504 modifications ET and RA. Additional student and teacher modeling, paired learning groups, and concrete representations will help to guide all students to reach expected outcomes. Differentiated assignments and practice will focus on remediation and enrichment of lower and higher ability groups.

Engage (Anticipatory Set)

- **Capture the students' attention, stimulate their thinking and help them access prior knowledge. Consider novelty, meaning and emotion.**

Today we will learn two ways to multiply fractions by whole numbers.

Instructional Practices Used in this Lesson

Coaching	✓	**Providing Directions/ Instructions**	✓	**Learning Centers**	
Discussion	✓	**Providing opportunities for practice**	✓	**Teacher-directed Questions and Answers**	✓
Hands-on experiences	✓	**Direct Instruction**	✓	**Modeling**	✓
Presentation	✓	**Testing**		Other: Math6.org	✓

Suggested brained-based learning activities promoting the above Instructional Practices					
Think-Pair-Share	✓	Instructional Games		Music/Rhyme/Rhythm/Rap	
Thinking Maps	✓	Student Facilitators		Movement	
Technology Integration	✓	Storytelling		Humor	
Use of visuals	✓	Field Trips(Virtual)		Project/Problem- Based Learning	
Metaphor/Simile/Analogy		Reciprocal Teaching		Mnemonics	
Peer/Self Assessment	✓	Drawing or illustrating		Other:	
Writing/Reflecting/Journals	✓	Simulations/Role Play		Other: Math6.org	✓

Type(s) of Grouping Used:
___small group _✓_student pairs _✓_whole group _✓_individual

Explain, Explore, Elaborate
Content Chunks: How will you divide and teach the content?

- **Transitions should be used every 5-15 minutes to keep the students' brains engaged.**
- **Involve students in an analysis of their explorations.**
- **Use reflective activities to clarify and modify student understanding.**
- **Give students time to think, plan, investigate and organize collected information.**
- **Give students the opportunity to expand and solidify their understanding of the concept and/or apply it to a real-world situation.**

See next page for instructional detail.

Evaluate (Feedback/Closure)

- **Evaluate throughout the lesson. Are students able to answer the Essential Question(s)?**
- **Present students with a scoring guide (such as a rubric) at the beginning to self-assess.**
- **What assessment(s) will be used to be sure the students are successful?**

Today's Extension will teach you how to use a spreadsheet (Excel) to multiply fractions. Use this extension to complete your homework or create a double bubble map to compare and contrast the simplify first style with multiply then simplify. Write a persuasive paragraph to try to persuade your readers to employ the style you prefer.

Describe, Analyze, Reflect:

- **How effective was the lesson? How did the strategies help the students deepen their understanding? Cite evidence of student work, performance, behaviors, and/or remarks to support your view.**
- **What caused the lesson to go well? What challenges did you encounter?**
- **What did you do to contribute to the lesson's effectiveness?**
- **What learning did you take from this lesson to apply to future lessons? What would you do differently next time?**

Date: _____ Time Frame: **80 minutes**

Multiplying Fractions by Whole Numbers

Essential Question: During the next month, you will learn the many skills needed to work with and understand fractions. During this time you are to consider the following: All decimals are fractions with the common denominator as a power of 10. Students and adults have a much easier time understanding the value of a fraction when it is represented as a decimal. Almost all calculators convert fractions to decimals in order to compute then convert the decimal back to a fraction to report the answer. If all of these things are true, would you vote to eliminate fractions and require all fractions to be decimals or keep fractions and have people learn the skills necessary to use them? (Explain - Keep a daily diary to track your current thoughts and see when, if and how often you change your mind)

Objective (s) Numbers: **1.04a**
Outcomes: Analyze computational strategies
Materials: Textbook pages 192-195
Anticipatory Set: Today we will learn two ways to multiply fractions by whole numbers.

During the Lesson

Presentation of Information:
Integration of Other Subjects: Writing (persuasion)
Reading (vocabulary, problem solving, analyzing expectation)
Integration of Reading: Reading for information and interpretation.
Integration of Technology: Computer, Projector, PowerPoint, Internet

Modeling: The first method is the simplify first style and is the way your parents do this. The second method is called "Best Way" and is named after the young man with whom a teacher was working when this new way was developed. You will have a chance to practice both ways and decide for yourself which method you prefer.

Differentiation: 504 modifications ET and RA. Additional student and teacher modeling will help to guide all students to reach expected outcomes.

Guided Practice: Model simplify first using {5 * 7/25 ; 15 * 9/10; 13 * 5/8} Model "Best Method" using {5 * 7/25 ; 15 * 9/10; 13 * 5/8}

After the Lesson

Independent Practice: Text page 194-195 {1–26, 45–46, 50–58}
AIG: {22–58}
Assign workbook page 4.9

Closure / Assessment: Today's Extension will teach you how to use a spreadsheet (Excel) to multiply fractions. Use this extension to complete your homework or create a double bubble map to compare and contrast the simplify first style with multiply then simplify. Write a persuasive paragraph to try to persuade your readers to employ the style you prefer.

Integration with School-wide Focus: Improve mathematics computation and problem solving.

Related Math6.org Activities: There are **13** activities connected with this lesson
Multiplying Fractions Lesson
Multiply Fractions Guided Practice
Simplify First Guided Practice
Standard Style Guided Practice
**Multiply Fractions with Excel

Math Objectives

1.03, 1.04a, 1.05

Compare and order rational numbers; Analyze computational strategies; Develop fluency in the use of factors, multiples, exponential notation, and prime factorization.

Essential Question

For the last several assessments, you have been asked, "If you could press restart, what would you do differently to prepare for today's exam?" It is time to review those answers and create a plan to make the changes in your lifestyle that you will need to achieve your goals. How will you implament two changes to your lifestyle that you will enable you to have fewer regrets during examination? (action plan)

Wayne County Schools 21st Century Instructional Lesson Plan
Number Theory and Fractions Review

NAME:	Subject: Math
Date:	Grade Level (s): 6

Standards/Objectives Addressed (NCSCOS)

1.03, 1.04a, 1.05
Compare and order rational numbers; Analyze computational strategies; Develop fluency in the use of factors, multiples, exponential notation, and prime factorization.

Essential Question(s) (In student-friendly terms)

For the last several assessments, you have been asked, "If you could press restart, what would you do differently to prepare for today's exam?" It is time to review those answers and create a plan to make the changes in your lifestyle that you will need to achieve your goals. How will you implement two changes to your lifestyle that you will enable you to have fewer regrets during examination? (action plan)

Assess (Look at student data to plan. Use formative and/or summative assessments.)

Examine student performance on various skill assessments, journals and projects.

High Yield Instructional Strategies (check all that apply to the lesson)

Identifying similarities and differences		Reinforcing effort and providing recognition	✓	Nonlinguistic representation		Setting objectives and providing feedback	✓
Questions, cues, and advance organizers		Summarizing and note taking		Cooperative learning	✓	Generating and testing hypotheses	
Homework and practice	✓						

Learner Diversity

- **How will you differentiate to meet the needs of all learners in your class?**

504 modifications ET and RA. Additional student and teacher modeling, paired learning groups, and concrete representations will help to guide all students to reach expected outcomes.

Engage (Anticipatory Set)

- **Capture the students' attention, stimulate their thinking and help them access prior knowledge. Consider novelty, meaning and emotion.**

Today we will review the skills that we have been studying during this unit. We will practice test taking skills and remediate those skills about which we don't feel as comfortable as others.

Instructional Practices Used in this Lesson

Coaching	✓	**Providing Directions/ Instructions**	✓	**Learning Centers**	
Discussion		**Providing opportunities for practice**	✓	**Teacher-directed Questions and Answers**	
Hands-on experiences		**Direct Instruction**		**Modeling**	
Presentation		**Testing**		Other: Math6.org	✓

Suggested brained-based learning activities promoting the above Instructional Practices					
Think-Pair-Share	✓	Instructional Games		Music/Rhyme/Rhythm/Rap	
Thinking Maps		Student Facilitators	✓	Movement	
Technology Integration	✓	Storytelling		Humor	
Use of visuals		Field Trips(Virtual)		Project/Problem- Based Learning	
Metaphor/Simile/Analogy		Reciprocal Teaching		Mnemonics	
Peer/Self Assessment	✓	Drawing or illustrating		Other:	
Writing/Reflecting/Journals	✓	Simulations/Role Play		Other:	

Type(s) of Grouping Used:

___small group _✓_student pairs ___whole group _✓_individual

Explain, Explore, Elaborate

Content Chunks: How will you divide and teach the content?

- **Transitions should be used every 5-15 minutes to keep the students' brains engaged.**
- **Involve students in an analysis of their explorations.**
- **Use reflective activities to clarify and modify student understanding.**
- **Give students time to think, plan, investigate and organize collected information.**
- **Give students the opportunity to expand and solidify their understanding of the concept and/or apply it to a real-world situation.**

See next page for instructional detail.

Evaluate (Feedback/Closure)

- **Evaluate throughout the lesson. Are students able to answer the Essential Question(s)?**
- **Present students with a scoring guide (such as a rubric) at the beginning to self-assess.**
- **What assessment(s) will be used to be sure the students are successful?**

Have co-operative learning groups review and discuss their answers before turning their papers in for correction by the teacher.

Describe, Analyze, Reflect:

- **How effective was the lesson? How did the strategies help the students deepen their understanding? Cite evidence of student work, performance, behaviors, and/or remarks to support your view.**
- **What caused the lesson to go well? What challenges did you encounter?**
- **What did you do to contribute to the lesson's effectiveness?**
- **What learning did you take from this lesson to apply to future lessons? What would you do differently next time?**

Date: _____ Time Frame: **80 minutes**

Number Theory and Fractions Review

Essential Question: For the last several assessments, you have been asked, "If you could press restart, what would you do differently to prepare for today's exam?" It is time to review those answers and create a plan to make the changes in your lifestyle that you will need to achieve your goals. How will you implement two changes to your lifestyle that you will enable you to have fewer regrets during examination? (action plan)

Objective (s) Numbers: **1.03, 1.04a, 1.05**

Outcomes: Compare and order rational numbers; Analyze computational strategies; Develop fluency in the use of factors, multiples, exponential notation, and prime factorization.

Materials: Textbook pages 196, 202-207; Test Form B

Anticipatory Set: Today we will review the skills that we have been studying during this unit. We will practice test taking skills and remediate those skills about which we don't feel as comfortable as others.

During the Lesson

Presentation of Information:

Integration of Other Subjects: Reading (vocabulary, problem solving, analyzing expectation)

Integration of Reading: Reading for information and interpretation.

Integration of Technology: Computer, Projector, PowerPoint, Internet

Modeling: Discuss the value of careful review, the process that should occur when errors are made and the importance of reviewing material that students are less comfortable with.

Differentiation: 504 modifications ET and RA. Additional student and teacher modeling will help to guide all students to reach expected outcomes.

Guided Practice: Discuss Instructions for the review on pages 202-204. Have the students review the Headings and address and questions or requests for immediate remediation.

After the Lesson

Independent Practice: Text page 202-204 {1-67}
AIG: {1-67}
Assign Test Form B

Closure / Assessment: Have co-operative learning groups review and discuss their answers before turning their papers in for correction by the teacher.

Integration with School-wide Focus: Improve mathematics computation and problem solving.

Related Math6.org Activities: There are **many** activities connected with this lesson

Vocabulary Matching Practice
Practice Test
Fraction Readiness Quiz Bowl
Fraction Readiness Millionaire

Name _____ Date _____ Class _____

CHAPTER 4

Chapter Test

Form B

Tell whether each number is divisible by 2, 3, 4, 5, 6, 9, and 10.

1. 840

_____

2. 875

_____

3. 1,430

_____

Tell whether each number is prime or composite.

4. 47 _____

5. 112 _____

6. 61 _____

List all the factors of each number.

7. 49

_____

8. 100

_____

9. 144

_____

_____

Write the prime factorization of each number.

10. 45

_____

11. 65

_____

12. 132

_____

Find the GCF of each set of numbers.

13. 54 and 80 _____

14. 52 and 26 _____

15. 30, 60, and 90 _____

Write each decimal as a fraction or a mixed number in simplest form.

16. 0.6 _____

17. 5.75 _____

18. 0.125 _____

Write each fraction or mixed number as a decimal.

19. $\frac{3}{20}$ _____

20. $6\frac{1}{5}$ _____

21. $9\frac{11}{15}$ _____

Name _____ Date _____ Class _____

CHAPTER 4

Chapter Test

Form B, continued

Write each fraction in simplest form.

22. $\frac{6}{54} =$ _____

23. $\frac{24}{48} =$ _____

24. $\frac{14}{21} =$ _____

Compare. Write <, >, or =.

25. $\frac{5}{8} \square \frac{6}{7}$

26. $\frac{3}{4} \square \frac{9}{10}$

27. $\frac{8}{15} \square \frac{24}{45}$

Order the fractions from least to greatest.

28. $\frac{1}{2}, \frac{4}{5}, \frac{5}{6}$ _____

29. $\frac{5}{9}, \frac{2}{5}, \frac{6}{7}$ _____

30. $\frac{7}{9}, \frac{3}{4}, \frac{11}{15}$ _____

Write each mixed number as an improper fraction.

31. $5\frac{2}{3} =$ _____

32. $3\frac{2}{5} =$ _____

33. $7\frac{5}{9} =$ _____

Multiply. Write your answers in simplest form.

34. $5 \cdot \frac{1}{8}$ _____

35. $12 \cdot \frac{1}{6}$ _____

36. $15 \cdot \frac{1}{4}$ _____

Solve.

37. On Monday, it snowed $11\frac{1}{2}$ inches. On Tuesday, an additional $1\frac{1}{2}$ inches of snow fell. How much snow fell altogether?

_____

38. Linda has a piece of ribbon $15\frac{7}{8}$ inches long. She cuts a piece $3\frac{1}{8}$ inches long. How much ribbon does she have left?

_____

39. Roberto bought of $2\frac{1}{4}$ pounds of ham and $3\frac{5}{8}$ pounds of turkey. How much lunch meat did he buy?

_____

40. A food service class served $15\frac{1}{2}$ loaves of pumpkin bread at the faculty breakfast. There were 10 equal slices in every whole loaf. How many slices were served?

_____

Wayne County Schools 21st Century Instructional Lesson Plan
Number Theory and Fractions Assessment

NAME:	Subject: Math
Date:	Grade Level (s): 6

Standards/Objectives Addressed (NCSCOS)

1.03, 1.04a, 1.05
Compare and order rational numbers; Analyze computational strategies; Develop fluency in the use of factors, multiples, exponential notation, and prime factorization.

Essential Question(s) (In student-friendly terms)

For the last several assessments, you have been asked, "If you could press restart, what would you do differently to prepare for today's exam?" It is time to review those answers and create a plan to make the changes in your lifestyle that you will need to achieve your goals. How will you implement two changes to your lifestyle that you will enable you to have fewer regrets during examination? (action plan)

Assess (Look at student data to plan. Use formative and/or summative assessments.)

Examine student performance on concepts review.

High Yield Instructional Strategies (check all that apply to the lesson)

Identifying similarities and differences		Reinforcing effort and providing recognition	✓	Nonlinguistic representation		Setting objectives and providing feedback	✓
Questions, cues, and advance organizers		Summarizing and note taking		Cooperative learning		Generating and testing hypotheses	
Homework and practice							

Learner Diversity

- **How will you differentiate to meet the needs of all learners in your class?**

504 modifications ET and RA.

Engage (Anticipatory Set)

- **Capture the students' attention, stimulate their thinking and help them access prior knowledge. Consider novelty, meaning and emotion.**

Today we will assess our mastery of Number Theory and Fractions.

Instructional Practices Used in this Lesson

Coaching		**Providing Directions/ Instructions**	✓	**Learning Centers**	
Discussion		**Providing opportunities for practice**		**Teacher-directed Questions and Answers**	
Hands-on experiences		**Direct Instruction**		**Modeling**	
Presentation		**Testing**	✓	Other:	

Suggested brained-based learning activities promoting the above Instructional Practices					
Think-Pair-Share		Instructional Games		Music/Rhyme/Rhythm/Rap	
Thinking Maps		Student Facilitators		Movement	
Technology Integration	✓	Storytelling		Humor	
Use of visuals		Field Trips(Virtual)		Project/Problem- Based Learning	
Metaphor/Simile/Analogy		Reciprocal Teaching		Mnemonics	
Peer/Self Assessment		Drawing or illustrating		Other:	
Writing/Reflecting/Journals	✓	Simulations/Role Play		Other:	

Type(s) of Grouping Used:
___small group ___student pairs ___whole group _✓_individual

Explain, Explore, Elaborate
Content Chunks: How will you divide and teach the content?

- **Transitions should be used every 5-15 minutes to keep the students' brains engaged.**
- **Involve students in an analysis of their explorations.**
- **Use reflective activities to clarify and modify student understanding.**
- **Give students time to think, plan, investigate and organize collected information.**
- **Give students the opportunity to expand and solidify their understanding of the concept and/or apply it to a real-world situation.**

See next page for instructional detail.

Evaluate (Feedback/Closure)

- **Evaluate throughout the lesson. Are students able to answer the Essential Question(s)?**
- **Present students with a scoring guide (such as a rubric) at the beginning to self-assess.**
- **What assessment(s) will be used to be sure the students are successful?**

Write a paragraph evaluation of your expected performance on this test. What did you do well on? What did you have trouble with? How did you prepare for this test and what would you like to do differently for the next exam?

Describe, Analyze, Reflect:

- **How effective was the lesson? How did the strategies help the students deepen their understanding? Cite evidence of student work, performance, behaviors, and/or remarks to support your view.**
- **What caused the lesson to go well? What challenges did you encounter?**
- **What did you do to contribute to the lesson's effectiveness?**
- **What learning did you take from this lesson to apply to future lessons? What would you do differently next time?**

Date: _____ Time Frame: **80 minutes**

Number Theory and Fractions Assessment

Essential Question:	For the last several assessments, you have been asked, "If you could press restart, what would you do differently to prepare for today's exam?" It is time to review those answers and create a plan to make the changes in your lifestyle that you will need to achieve your goals. How will you implement two changes to your lifestyle that you will enable you to have fewer regrets during examination? (action plan)
Objective (s) Numbers:	**1.03, 1.04a, 1.05**
Outcomes:	Compare and order rational numbers; Analyze computational strategies; Develop fluency in the use of factors, multiples, exponential notation, and prime factorization.
Materials:	Cumulative Assessment (Form B)
Anticipatory Set:	Today we will assess our mastery of Number Theory and Fractions.

During the Lesson

Presentation of Information:	
Integration of Other Subjects:	Writing (evaluation) Reading (vocabulary, problem solving, analyzing expectation)
Integration of Reading:	Reading for information and interpretation.
Integration of Technology:	Computer, Projector, PowerPoint, Internet
Modeling:	Review the Practice Test, answer questions and model answers.
Differentiation:	504 modifications ET and RA. Additional student and teacher modeling will help to guide all students to reach expected outcomes.
Guided Practice:	Discuss the Instructions.

After the Lesson

Independent Practice	Assign Cumulative Review Test Form B
Closure / Assessment:	Write a paragraph evaluation of your expected performance on this test. What did you do well on? What did you have trouble with? How did you prepare for this test and what would you like to do differently for the next exam? Choose a Journal entry to share with your class.

Integration with School-wide Focus: Improve mathematics computation and problem solving.

Related Math6.org Activities: There are **many** activities connected with this lesson

Vocabulary Matching Practice
Practice Test
Fraction Readiness Quiz Bowl
Fraction Readiness Millionaire

Name _____ Date _____ Class _____

CHAPTER 4

Cumulative Test

Form B

Choose the best answer.

1. Which is a prime number?

A 12 **C** 51

B 36 **D** 71

2. Which number is greatest?

F 8.402 **H** $8\frac{4}{5}$

G 8.04 **J** $8\frac{3}{4}$

3. What is the GCF of 30, 42, and 66?

A 2 **C** 6

B 3 **D** 10

4. What is the value of $8^2 \cdot 3 + 4 - 3^2$?

F 43 **H** 187

G 46 **J** 190

5. Which fraction is NOT equivalent to $\frac{5}{15}$?

A $\frac{4}{6}$ **C** $\frac{20}{60}$

B $\frac{10}{30}$ **D** $\frac{1}{3}$

6. The area of a rectangle is 56 units^2. Its width is 7 units. What is its length?

F 6 units **H** 10 units

G 8 units **J** 49 units

7. What is the product of 10 and $\frac{1}{2}$?

A $\frac{1}{2}$ **C** $10\frac{1}{2}$

B 5 **D** 20

8. Which is 3.08 written as a mixed number?

F $3\frac{8}{30}$ **H** $3\frac{2}{25}$

G $\frac{308}{100}$ **J** $3\frac{1}{125}$

9. Which measure is equivalent to 15 meters?

A 150 cm **C** 0.15 km

B 1.5 km **D** 1.5×10^3 cm

10. What is 456,000,000 written in scientific notation?

F 4.56×10^6 **H** 4.56×10^8

G 4.56×10^7 **J** 4.56×10^9

11. What is $4\frac{1}{12}$ written as an improper fraction?

A $\frac{4}{12}$ **C** $\frac{49}{12}$

B $\frac{48}{12}$ **D** $\frac{50}{2}$

12. Add $\frac{1}{9} + \frac{5}{9}$.

F $\frac{1}{3}$ **H** $\frac{3}{4}$

G $\frac{2}{3}$ **J** $\frac{6}{18}$

13. What is the area of a rectangle with length 12 cm and width 8 cm?

A 20 cm **C** 96 cm^2

B 40 cm^2 **D** 108 cm^2

14. What is $\frac{23}{3}$ as a mixed number?

F 10 **H** $7\frac{2}{3}$

G $10\frac{3}{10}$ **J** $7\frac{1}{3}$

Name _____ Date _____ Class _____

CHAPTER 4

Cumulative Test

Form B, continued

15. Which set of numbers is ordered from least to greatest?

A 0.67, $\frac{2}{3}$, $\frac{7}{10}$

B $\frac{2}{3}$, $\frac{7}{10}$, 0.67

C $\frac{2}{3}$, 0.67, $\frac{7}{10}$

D $\frac{7}{10}$, $\frac{2}{3}$, 0.67

16. Which measure is equivalent to 2,257 mg?

F 2.257 g **H** 0.257 kg

G 2.257 cg **J** 25.7 dg

17. Which is the best estimate for 105 × 68?

A 7,000 **C** 700

B 6,000 **D** 600

18. Evaluate $4x$ for $x = 16$.

F 4 **H** 12

G 64 **J** 32

19. Which number is the greatest?

A 345,678,213 **C** 354,687,312

B 345,687,123 **D** 354,876,312

20. Which number is five million, four hundred twenty thousand, sixty-three in standard form?

F 5,042,630 **H** 5,000,426

G 5,420,063 **J** 5,420,630

21. Which number has a 9 in the ten-thousands place?

A 794,274 **C** 164,790

B 978,054 **D** 874,159

22. Which number is the standard form for 400,000 + 60,000 + 20 + 9?

F 4,629 **H** 46,290

G 460,029 **J** 406,290

23. Which is a solution to the equation $15a = 225$?

A $a = 5$ **C** $a = 15$

B $a = 10$ **D** $a = 20$

24. Which is a solution to the equation $w + 487 = 502$?

F $w = 15$ **H** $w = 215$

G $w = 105$ **J** $w = 989$

25. Which is a solution to the equation $y - 67 = 31$?

A $y = 98$ **C** $y = 54$

B $y = 89$ **D** $y = 36$

26. Find the missing value in the table.

a	$3a + 2$
8	26
10	?

F 28 **H** 36

G 32 **J** 58

27. Which means "6 less than a"?

A $a + 6$ **C** $6a$

B $a - 6$ **D** $a \div 6$

28. What is a word phrase for $10r$?

F 10 more than r

G 10 less than r

H the quotient of 10 and r

J the product of 10 and r

Name _____ Date _____ Class _____

CHAPTER 4

Cumulative Test

Form B, continued

29. Which value of h is a solution for the equation $h - 1 = 8$.

A $h = 6$ **C** $h = 8$

B $h = 7$ **D** $h = 9$

30. Which expression completes the table?

t	??
8	25
9	27
10	29

F $t + 14$ **H** $2t + 9$

G $4t - 1$ **J** $3t + 1$

31. What operation does the word "difference" indicate?

A addition **C** multiplication

B subtraction **D** division

32. Which value of y makes the equation $\frac{55}{y} = 5$ true?

F $y = 5$ **H** $y = 12$

G $y = 11$ **J** $y = 20$

33. What are the next three terms in the pattern 85, 75, 65, 55,…?

A 45, 35, 25 **C** 45, 25, 15

B 40, 30, 20 **D** 50, 45, 40

34. Jack had $3,712 in his savings account when he made a deposit of $321. What was the new balance in Jack's account?

F $4,033 **H** $3,391

G $4,003 **J** $3,400

35. Helen earns $30 per week on her paper route. So far she has earned $3,360. For how many weeks has she had the paper route?

A 112 **C** 11

B 60 **D** 3,330

36. What is $12 \times 12 \times 12 \times 12 \times 12$ written in exponential form?

F 12^1 **H** 5^{12}

G 12^3 **J** 12^5

37. What is the value of $5^2 - 4^2$?

A 0 **C** 9

B 1 **D** 25

38. $5(12 + a) = 5(12) + 5(a)$ is an example of which property?

F Associative **H** Distributive

G Commutative **J** Exponential

39. What is 8.125 written in words?

A eight and one hundred five tenths

B eight and one hundred twenty-five thousandths

C eight thousand one hundred twenty-five

D eight and one hundred five thousandths

40. Jenna and three friends go to the school carnival. They each buy 15 tickets. The total for the tickets is $18.00. How much does each ticket cost?

F $0.25 **H** $0.35

G $0.30 **J** $0.40

Name _____ Date _____ Class _____

CHAPTER 4

Cumulative Test

Form B, continued

41. Solve $w - 12.4 = 54.7$.

A $w = 42.3$ **C** $w = 67.1$

B $w = 54.7$ **D** $w = 84.2$

42. Simplify $26 - 0.7$.

F 26.3 **H** 25.7

G 26.7 **J** 25.3

43. Solve $7x = 65.8$.

A $x = 9$ **C** $x = 10.4$

B $x = 9.4$ **D** $x = 12.3$

44. By which numbers is 90 divisible?

F 2, 3, 4, 5, 6, 9 **H** 2, 3, 5, 20

G 2, 3, 5, 6, 9, 10 **J** 2, 5, 7

45. Carol earns $5.25 per hour. She worked 15 hours last week. How much did she earn?

A $82.25 **C** $52.15

B $78.75 **D** $25.85

46. Karen has 30 photos from a trip to Dallas and 48 photos from a trip to Austin. She wants to put all of the photos in an album so that the photos from each trip are in separate sections. She also wants the same number of photos on each page. What is the greatest number of photos she can put on each page?

F 4 **H** 8

G 6 **J** 12

47. What is $\frac{9}{50}$ as a decimal?

A 0.9 **C** 0.59

B 0.18 **D** 0.95

48. Divide $18.84 \div 0.04$.

F 471 **H** 4.71

G 47.1 **J** 0.0471

49. Compare $3\frac{1}{4} \square 3\frac{1}{5}$.

A $>$ **C** $=$

B $<$ **D** not here

50. Which equation is true given $x = 9$?

F $9x = 72$ **H** $\frac{54}{x} = 7$

G $89 + x = 98$ **J** $34 - x = 43$

Name _____

Number Theory and Fractions Assessment

1	A	B	C	D
2	F	G	H	J
3	A	B	C	D
4	F	G	H	J
5	A	B	C	D
6	F	G	H	J
7	A	B	C	D
8	F	G	H	J
9	A	B	C	D
10	F	G	H	J
11	A	B	C	D
12	F	G	H	J
13	A	B	C	D
14	F	G	H	J
15	A	B	C	D
16	F	G	H	J
17	A	B	C	D
18	F	G	H	J
19	A	B	C	D
20	F	G	H	J
21	A	B	C	D
22	F	G	H	J
23	A	B	C	D
24	F	G	H	J
25	A	B	C	D
26	F	G	H	J
27	A	B	C	D
28	F	G	H	J

29	A	B	C	D
30	F	G	H	J
31	A	B	C	D
32	F	G	H	J
33	A	B	C	D
34	F	G	H	J
35	A	B	C	D
36	F	G	H	J
37	A	B	C	D
38	F	G	H	J
39	A	B	C	D
40	F	G	H	J
41	A	B	C	D
42	F	G	H	J
43	A	B	C	D
44	F	G	H	J
45	A	B	C	D
46	F	G	H	J
47	A	B	C	D
48	F	G	H	J
49	A	B	C	D
50	F	G	H	J

Name _____

Number Theory and Fractions Assessment

1	A	B	C	D
2	F	G	H	J
3	A	B	C	D
4	F	G	H	J
5	A	B	C	D
6	F	G	H	J
7	A	B	C	D
8	F	G	H	J
9	A	B	C	D
10	F	G	H	J
11	A	B	C	D
12	F	G	H	J
13	A	B	C	D
14	F	G	H	J
15	A	B	C	D
16	F	G	H	J
17	A	B	C	D
18	F	G	H	J
19	A	B	C	D
20	F	G	H	J
21	A	B	C	D
22	F	G	H	J
23	A	B	C	D
24	F	G	H	J
25	A	B	C	D
26	F	G	H	J
27	A	B	C	D
28	F	G	H	J

29	A	B	C	D
30	F	G	H	J
31	A	B	C	D
32	F	G	H	J
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34	F	G	H	J
35	A	B	C	D
36	F	G	H	J
37	A	B	C	D
38	F	G	H	J
39	A	B	C	D
40	F	G	H	J
41	A	B	C	D
42	F	G	H	J
43	A	B	C	D
44	F	G	H	J
45	A	B	C	D
46	F	G	H	J
47	A	B	C	D
48	F	G	H	J
49	A	B	C	D
50	F	G	H	J

Number Theory and Fractions Assessment

1	A	B	C	
2	F	G		J
3	A	B		D
4	F	G		J
5		B	C	D
6	F		H	J
7	A		C	D
8	F	G		J
9	A	B	C	
10	F	G		J
11	A	B		D
12	F		H	J
13	A	B		D
14	F	G		J
15	A	B		D
16		G	H	J
17		B	C	D
18	F		H	J
19	A	B	C	
20	F		H	J
21		B	C	D
22	F		H	J
23	A	B		D
24		G	H	J
25		B	C	D
26	F		H	J
27	A		C	D
28	F	G	H	

29	A	B	C	
30	F	G		J
31	A		C	D
32	F		H	J
33		B	C	D
34		G	H	J
35		B	C	D
36	F	G	H	
37	A	B		D
38	F	G		J
39	A		C	D
40	F		H	J
41	A	B		D
42	F	G	H	
43	A		C	D
44	F		H	J
45	A		C	D
46	F		H	J
47	A		C	D
48		G	H	J
49		B	C	D
50	F		H	J

Chapter 4 Assessment

12	100%
11	92%
10	83%
9	75%
8	67%
7	58%
6	50%
5	42%
4	33%
3	25%
2	17%
1	8%
0	0%