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

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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.

1.05

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

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	Standards/Objectives Addressed (NCSCOS)											
1.05												
Develop fluency in the	use of f	actors, multip	bles	, exp	onentia	l no	tation, 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)												
			una	/01 30	mative	4330						
A				- 4 1 -		. !		6				
A common error (weak	ness) ir		nat	stude		sitat	e to sum the digits	TOF				
application of the 3 and	a nine r	ules. Studen	ts si	noula	review	(as	sess) compatible					
numbers to make this	process	easier and m	ore	likely	to occ	ur.						
High Yield Instructiona	al Strate	egies (check a	all t	hat a	pply to	the	lesson)					
Identifying similarities 🗸	Reinforci	ng effort and	✓	Nonlir	iguistic	✓	Setting objectives					
and differences	providing	recognition		repres	entation		and providing					
	Summar	zing and noto	~	Coope	rativo	✓	feedback	_				
advance organizers	taking	izing and note		learning			testing hypotheses					
Homework and practice 🗸					0							
Learner Diversity						<u> </u>	•					
How will you different	ntiate to	meet the needs o	of all	learne	ers in you	ır cla	ss?					
504 modifications ET a	nd RA.	Additional stu	ude	nt and	d teach	er m	nodeling, paired					
learning groups, and co	oncrete	representatio	ns v	will h	elp to q	uide	e all students to read	ch				
expected outcomes. D	ifferent	iated assignm	nent	s and	practio	ce w	ill focus on remedia	tion				
and enrichment of lowe	er and h	igher ability (aroi		praem							
			9									
Engage (Anticipatory S	Set)											
Capture the students Capsider poyelty, ma	s' attentio	on, stimulate the	ir th	inking	and help	ther	n access prior knowledg	e.				
Consider noverty, me	eaning an	a emotion.										
Today we will learn abo	out divid	ibility rules i	orim		mhors	and	composite numbers					
Opco we master the 2		rulos 2diait	nrin		mbore	will	bo a span Add the	11				
ond 12 rules and 2 digi	3, 5, 7	rules, zulyit	rahl		aithar	VVIII	be a shap. Auu the	11				
and 13 rules and 3 digi	t prime	s will be no p	ומסז	lems	enner.							
Instructional Practices	Used in	n this Lesson										
Coaching	✓	Providing Dire	ctior	ns/ √	Learni	ing Co	enters					
Discourse		Instructions			+							
UISCUSSION	l v	Providing	for	l v	 Teacher-directed Questions and Approximate 			\checkmark				
		practice	51		7113006	.13						
Hands-on experiences	✓	Direct Instruct	ion	~	Model	Modeling						
Presentation	\checkmark	Testing			Other:	Mat	h6.org	~				
								_				

Suggested brained-based learning	l act	ivities promoting the ab	ove	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	\checkmark	Simulations/Role Play		Other: Math6.org	\checkmark						
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 instructio	nal	detail.									
Evaluate (Feedback/Closur Evaluate throughout the le Present students with a so What assessment(s) will be The divisibility rule for 6 is the	e) esso corir <u>be us</u> that	n. Are students able to ng guide (such as a rubri sed to be sure the stude t a number must be	ansv ic) a <u>nts a</u> div	wer the Essential Question(s)? t the beginning to self-assess. are successful? /isible by 2 and 3. Use this rul	le						
to help you invent rules for correct.	12,	15 and 18. Check	уо	ur algorithm to see if you are							
 Describe, Analyze, Reflect: How effective was the less understanding? Cite evide support your view. What caused the lesson to What did you do to contrib What learning did you tak 	son? ence go go oute e fro	P How did the strategies of student work, perfor well? What challenges to the lesson's effective om this lesson to apply t	help mar did y nes o fu	o the students deepen their nce, behaviors, and/or remarks to you encounter? s? ture lessons? What would you do							

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: Outcomes:	1.05 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:	
Integration of Reading:	Reading (vocabulary, problem solving, analyzing expectation) 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 $24 \div 3 = 8$ 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	Sieve of Eratosthenes Lesson
Learn the Divisibility Rules	Prime / Composite Lesson
Rules 2, 3 and 5 Quiz	Prime / Composite Guided Practice
Tested Rules Quiz	**Divisibility Rules Millionaire
Digit Sums Practice	

						Nan	1e			
			[Divisibi	lity Wo	rkshee	et			
	Number	digit sum	2	3	4	5	6	9	10	Answer
s	1248	15	\checkmark	\checkmark	\checkmark		\checkmark			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 $(123\underline{64}...64 \div 4 = 16)$
- 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							

1.05

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

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:	Gra	ade L	_e	vel (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)											
I oday, 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 studer		to plan	. Use formative	and	7 or su	ım	mative	asse	ssments.)		
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											
	01100			inan	upiyi	''g		, 110		•	
High Vield Instructi	onals	Strate	nies (check a	all t	hat a	n	nlv to t	the	lesson)		
						וחי				1	
and differences	✓ Repr	einforcin roviding	g effort and recognition	Ŷ	repre	ng sei	ntation	v	and providing feedback		
Questions, cues, and	√ Sι	ummariz	ing and note	~	Соор	era	ative	~	Generating and ✓		
Homework and practice	√ la	aking			learn	Ing			testing hypotheses		
Learner Diversity				<u> </u>							
How will you diff	ferentia	ate to n	neet the needs o	of all	l learn	er	s in you	r cla	ss?		
504 modifications E	T and	RA.	Additional stu	Jde	nt an	nd	teache	er m	nodeling, paired		
learning groups, and	d cond	crete r	epresentatio	ns	will h	nel	p to gi	uide	e all students to reac	h	
expected outcomes.	Diffe	erentia	ated assignm	nent	ts and	dı	practic	e w	ill focus on remediat	ion	
and enrichment of lo	ower a	and hi	gher ability o	grou	Jps.						
		`									
• Capture the stud Consider novelty	r y Set lents' a , mean	i) attention ning and	n, stimulate the I emotion.	ir th	inking	g a	nd help	then	n access prior knowledge	•	
Today we will learn	about	t facto	rs and prime	fac	toriz	at	ion V	Ve v	will need to examine		
two versions of facto	orina	today	The list me	-thc	nd is	of	ten use	s be	and will show you all	of	
the factors of a num	ber	Prime	factorization	n is	the e	ea ea	siest to		se with larger number	ers	
and will help you to	auick	dv and	l easily find o	com	mon	fa fa	actors	and	common multiples.	15	
Instructional Practic	ces U	sed in	this Lesson								
Coaching		~	Providing Dire	ctior	ns/ '		Learnir	ng Ce	enters		
Discussion		~	Providing		•	/	Teache	er-dir	rected Questions and	+	
			opportunities f	or			Answe	rs		✓	
Hands-on experiences		✓	practice Direct Instruct	ion		/	Modeli	na		✓	
Presentation		· ✓	Testing	.011			Other:	Mat	h6.org	✓	
					1						

Suggested brained-based learning	act	ivities promoting the ab	ove	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	./	other					
Peer/Self Assessment	•	Drawing or illustrating	v	Other:					
writing/Reflecting/Journals	•	Simulations/Role Play		Other: Matho.org	v				
Type(s) of Grouping Used: small groupstudent	t pa	irs _ √_ whole grou	C	_✓_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 instructio	nal	detail.							
Evaluate (reedback/closure Evaluate throughout the le Present students with a so What assessment(s) will b Make up a rhyme or song to	esso orir <u>e u</u>	n. Are students able to og guide (such as a rubri sed to be sure the stude elp your classmates	ansv ic) a <u>nts a</u> me	wer the Essential Question(s)? t the beginning to self-assess. are successful? emorize the first 10 prime					
 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: Outcomes:	1.05 Develop fluency in the use of factors, multiples, exponential notation, and prime factorization.
Materials: Anticipatory Set:	Textbook pages 156-159 Today we will learn about factors and prime factorization.
Presentation of Information: Integration of Other Subjects: Integration of Reading: Integration of Technology:	Writing (poetry) Reading (vocabulary, problem solving, analyzing expectation) Reading for information and interpretation. 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 For	cus: Improve mathematics computation and problem solving.

Related Math6.org Activities:There are 10 activities connected with this lessonMemorize the Prime FactorsFactoring Ladders Guided PracticePrime Factorization Lesson**Prime Factorization MillionairePrime Factorization Guided Practice

1.05

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

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:					ade Le	vel (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 Instruction	nal Str	ate	gies (check a	ll t	hat ap	ply to	the	lesson)			
Identifying similarities and differences	Reinf provi	orcir ding	ng effort and recognition	✓ ✓	Nonling represe	uistic ntation	✓ ✓	Setting objectives and providing feedback			
Ouestions, cues, andadvance organizersHomework and practice	takin	g g	zing and note	•	learning]	•	testing hypotheses			
Learner Diversity How will you difference	entiate	to r	neet the needs o	of all	learner	s in you	r cla	ss?			
504 modifications ET learning groups, and expected outcomes. and enrichment of low	and R concre Differe ver an	A. ete enti d h	Additional stu representation ated assignm igher ability g	ide ns ent jrou	nt and will hel s and ups.	teache lp to gi practic	er m uide e w	nodeling, paired all students to reac ill focus on remediat	h ion		
Engage (Anticipatory Capture the studer Consider novelty, r	Set) nts' atte neaning	ntio g and	n, stimulate thei d emotion.	ir th	inking a	nd help	then	n access prior knowledge			
Today we learn how to find the greatest common factor of any data set.											
Instructional Practice	es Use	d ir	this Lesson								
Coaching		~	Providing Direct	tior	ns∕ ✓	Learnii	ng Ce	enters			
Discussion		~	Providing opportunities for practice	or	~	Teache Answe	er-dir rs	rected Questions and	~		
Hands-on experiences Presentation		✓ ✓	Direct Instructi Testing	ion	✓	Modeli Other:	ng Mat	h6.org	✓ ✓		

Suggested brained-based learning	act	ivities promoting the ab	ove	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		Others	+						
Peer/Self Assessment	•	Drawing or illustrating		Other:							
writing/Reflecting/Journals	•	Simulations/Role Play		Other: Matho.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 instructio	nal	detail.									
 Evaluate (Feedback/Closur Evaluate throughout the le Present students with a so What assessment(s) will be 	e) esso corir be us	n. Are students able to ng guide (such as a rubri sed to be sure the stude	ansv ic) a nts a	wer the Essential Question(s)? t the beginning to self-assess. are successful?							
Today's extension @ Math6 double bubble map to comp method for finding GCF. Wi	.org are rite	g is a Zoo Groups - and contrast the list a paragraph to disc	con st n cuss	nplete this extension or make a nethod and prime factoring s the similarities and difference	a ×s.						
 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 											

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: Outcomes:	1.05 Develop fluency in the use of factors, multiples, exponential notation, and prime factorization.
Materials: Anticipatory Set:	Textbook pages 160-165 Today we learn how to find the greatest common factor of any data set.
	During the Lesson
Presentation of Information: Integration of Other Subjects: Integration of Reading: Integration of Technology:	Writing (compare/contrast) Reading (vocabulary, problem solving, analyzing expectation) Reading for information and interpretation. 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 Foo	cus: 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
 There are 7 activities connected with this lesson

Name _

Date	Class	

CHAPTER Quiz			
 Choose the best ans 1. 240 is NOT divisit following? A 4 B 5 2. What type of num F prime G negative 	wer. ble by which of the C 6 D 9 ber is 51? H composite J even	 5. What is of 42 a A 2 B 3 6. What is of 24 a F 2 G 3 	s the greatest common factor nd 66? C 6 D 72 s the greatest common factor nd 9? H 6 J 72
 3. Which of the follow of 42? A 4 B 5 4. What is the prime F 4² • 7 G 2⁴ • 7 	wing is a factor C 6 D 22 factorization of 112? H $2^3 \cdot 3 \cdot 5$ J 8 \cdot 9	 7. Renee making Each a same r same r 16 truff all of th greates she ca A 2 B 3 	works at the Candy Boutique gift candy arrangements. rrangement must have the number of truffles and the number of suckers. If she has les and 24 suckers, and uses he pieces of candy, what is the st number of arrangements n make? C 8 D 6

Name _

CHAPTER Quiz			
 4 Section Choose the best 1. 240 is NOT difference A 4 B 5 What type of response of the prime 	 A answer. visible by which of the C 6 D 9 number is 51? H composite 	 5. What is the of 42 and 0 A 2 B 3 6. What is the of 24 and 9 F 2 	e greatest common factor 66? C 6 D 72 e greatest common factor 9? H 6
 G negative 3. Which of the f of 42? A 4 B 5 	J even following is a factor C 6 D 22	7. Renee wor making gif Each arrar same num same num 16 truffles	y 72 rks at the Candy Boutique t candy arrangements. ngement must have the ber of truffles and the ber of suckers. If she has and 24 suckers, and uses
 4. What is the pri F 4² • 7 G 2⁴ • 7 	H 2 ³ • 3 • 5 J 8 • 9	all of the p greatest nu she can m A 2 B 3	ieces of candy, what is the umber of arrangements ake? (C) 8 (D) 6

1.03 Compare and order rational numbers.

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:					ade L	evel (s)): 6		
Standards/Objectiv	es Ad	dress	ed (NCSCOS))					
1.03	1.03								
Compare and order	ratior	nal nu	mbers.						
Essential Question((s) (In	studen	t-friendly terms	5)					
Today you learned into fractions. Which	(have ch pro	learne cess c	ed) how to cl lo you find to	hang b be	ge fra the e	ctions easiest?	into ? (E	decimals and decima xplain)	als
Assess (Look at stude	nt data	to plan	. Use formative	and	/or su	nmative	asse	ssments.)	
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 Instruct	ional S	Strate	gies (check a	all tł	hat a	oply to	the	lesson)	
Identifying similarities and differences	✓ R pi	einforcir roviding	ng effort and recognition	~	Nonlin repres	guistic entation	~	Setting objectives and providing feedback	
Questions, cues, and advance organizers	✓ S ta	ummariz aking	zing and note	~	Coope learnii	rative ng	~	Generating and testing hypotheses	
Homework and practice	~								
Learner Diversity How will you dif	ferenti	ate to n	neet the needs o	of all	learne	ers in you	ır cla	ss?	
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.					h ion				
Engage (Anticipato • Capture the stud Consider novelty	ry Set dents' a y, mear	t) attentio ning and	n, stimulate the d emotion.	eir thi	inking	and help	then	n access prior knowledge	
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 Practi	ices U	sed in	this Lesson						
Coaching			Providing Dire	ction	s/ 🗸	Learni	ng Ce	enters	
Discussion		~	Providing opportunities f	for	~	Teach Answe	er-dii ers	rected Questions and	~
Hands-on experiences		✓	Direct Instruct	tion	✓	Model	ing		✓
Presentation		✓	Testing			Other:	Mat	h6.org	\checkmark

Suggested brained-based learning	j act	ivities promoting the ab	ove	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 groupstuden	t pa	irs _ <u>√</u> whole group	C	_ √_ 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 instruction	nal	detail.			
 Evaluate (Feedback/Closur Evaluate throughout the le Present students with a se What assessment(s) will I 	e) esso corir pe u:	n. Are students able to ng guide (such as a rubri sed to be sure the stude	ans ic) a nts :	wer the Essential Question(s)? t the beginning to self-assess. are successful?	
"Repeating decimals" is a b slogan to let the student kn repeat. Then make a poster classmates see how a repea	ran ow ⁻ , bi atin	d new concept for 6 that they can quit c rochure or other pre g decimal is found.	th divi esei	grade students. Think of a ding when the number begins ntation that will help your	to
 Describe, Analyze, Reflect: How effective was the less understanding? Cite evide support your view. What caused the lesson to What did you do to contril What learning did you tak differently next time? 	son? ence o go oute e fro	P How did the strategies of student work, perfor well? What challenges o to the lesson's effective om this lesson to apply to	help mar did y nes o fu	o the students deepen their nce, behaviors, and/or remarks to you encounter? s? ture lessons? What would you do	

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: Outcomes:	1.03 Compare and order rational numbers.
Materials: Anticipatory Set:	Textbook pages 166-170 Today we will be learning how to turn decimals into fractions and fractions into
	decimals.
Presentation of Information: Integration of Other Subjects: Integration of Reading:	Writing (persuasion) Reading (vocabulary, problem solving, analyzing expectation) Reading for information and interpretation.
integration of rechnology.	Computer, i tojector, i owen omt, 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 Cabool wide Fac	way Improve methometics computation and problem colving

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!

1.03 Compare and order rational numbers.

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:				Su	bjec	:t:	Math			
Date:					ade	Le	vel (s):	6		
Standards/Objectives Addressed (NCSCOS)										
1.03										
Compare and order	rational	nu	mbers.							
Essential Question(s	6) (In stu	uder	t-friendly terms	5)						
You will be (were) sh ways were you taug future? (Explain)	hown 2 ht last y	waj yea	ys to reduce r? Which wa	frac y do	ction o yo	ns t u t	o lowes hink yo	st to ou v	erms. Which of the 2 vill want to use in the	2 Ə
Assess (Look at studen	t data to	plar	n. Use formative	and	/or s	sum	mative a	sses	ssments.)	
Simplest form requires mastery of divisibility rules. Assess and analyze student strengths and weaknesses regarding divisibility rules and prime factorization.										
High Yield Instruction	onal Str	ate	gies (check a	all t	hat	ap	ply to t	he	lesson)	
Identifying similarities and differences	 ✓ Reint prov 	forcir iding	ng effort and recognition	~	Non repr	ling	uistic ntation	√	Setting objectives and providing feedback	
Questions, cues, and advance organizers	✓ Sum takir	mari: Ig	zing and note	~	Coo lear	pera ning	ative	✓	Generating and testing hypotheses	
	·									
How will you diff	erentiate	to r	neet the needs o	of all	l lear	ner	s in your	clas	ss?	
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 (Anticipator • Capture the study Consider novelty	y Set) ents' atte , meaning	entio g an	n, stimulate the d emotion.	ir th	inkin	ng a	nd help t	hen	n access prior knowledge.	
(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 Practic	ces Use	d ir	this Lesson							
Coaching		~	Providing Dire	ction	าร/	~	Learnin	g Ce	enters	
Discussion		~	Providing opportunities f practice	for		~	Teacher Answer	r-dir s	ected Questions and	~
Hands-on experiences		✓	Direct Instruct	ion		✓	Modelin	ıg		✓
Presentation		 ✓ 	Testing				Other:	Matl	h6.org	✓

Suggested brained-based learning	act	ivities promoting the ab	ove	Instructional Practices	
Think-Pair-Share	✓	Instructional Games		Music/Rhyme/Rhythm/Rap	T
Thinking Maps	✓	Student Facilitators		Movement	\square
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 _✓_studen	t pa	irs _√_whole grou	D	_✓_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 instructio	nal	detail.			
 Evaluate (Feedback/Closur Evaluate throughout the le Present students with a so What assessment(s) will be 	e) esso corir be u:	n. Are students able to ng guide (such as a rubri sed to be sure the stude	ansv ic) a nts a	wer the Essential Question(s)? t the beginning to self-assess. are successful?	
Today's extension @ Math6 easy to do concept called ex OR create a 4x4 that model 18/24 and 125/600}	.org ktra s si	y will teach you an a polations. I would mplifying the follow	adv. like ving	anced but important and fairly you to complete this extensio 4 fractions. {36/48 ; 27/63 ;	n.
 Describe, Analyze, Reflect: How effective was the less understanding? Cite evide support your view. What caused the lesson to What did you do to contrit What learning did you tak differently next time? 	son? ence go oute e fro	How did the strategies of student work, perfor well? What challenges to the lesson's effective on this lesson to apply t	help mar did y nes o fu	o the students deepen their nce, behaviors, and/or remarks to you encounter? s? ture lessons? What would you do	

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: Outcomes: Materials: Anticipatory Set:	1.03Compare and order rational numbers.Textbook pages 171-175Today 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: Integration of Reading: Integration of Technology:	Writing (sequencing) Reading (vocabulary, problem solving, analyzing expectation) Reading for information and interpretation. 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 the	nis lesson
Common Style GP	Reducing Fractions Lesson	**Extrapolations
Stoney Method GP	Reducing Fractions Guided Practice	
Equivalent Fractions Quiz	Lowest Terms Quiz	

1.03 Compare and order rational numbers.

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	
Date:	

Subject: Math

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

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: Matho.org	ľ							
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 part 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: Outcomes:	1.03 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. $\{2/3 \text{ and } 3/7; 6/6 \text{ and } 8/8; 11/3 \text{ and } 13/4; 9/25 \text{ and } 11/30\}$ Part 2- Model ordering fractions by changing them into decimals. $\{2/3, 1/5, 6/4, 3/4; 4/9, 4/5, 1/2, 5/12; 1.3, 13/5, 11/2, 16/11\}$											
	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







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: Date: Subject: Math

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	act	ivities promoting the ab	ove	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 groupstudent	: pa	irs _ <u>√</u> whole grou	C	_✓_individual	
Content Chunks: How will y Transitions should be used Involve students in an ana Use reflective activities to Give students time to thinl Give students the opportun apply it to a real-world site See next page for instruction	ou I eva Ilysi clar c, pl nity uati nal	divide and teach th ery 5-15 minutes to keep s of their explorations. ify and modify student to an, investigate and orga to expand and solidify t on.	e C p the unde anize heir	ontent? e students' brains engaged. erstanding. e collected information. understanding of the concept and/or	
Evaluate (Feedback/Closure • Evaluate throughout the le • Present students with a sc • What assessment(s) will b	e) esso orir	n. Are students able to ng guide (such as a rubri sed to be sure the stude	ansv ic) a	wer the Essential Question(s)? t the beginning to self-assess. are successful?	
Create a flow map that expl Then write a "How To" parag	ain gra	s how to change 12 ph to communicate	3/ the	5 into an improper fraction. e process.	
 Describe, Analyze, Reflect: How effective was the less understanding? Cite evide support your view. What caused the lesson to What did you do to contrib What learning did you take differently next time? 	son? ence go oute e fro	How did the strategies of student work, perfor well? What challenges to the lesson's effective on this lesson to apply t	help mar did y nes o fu	o the students deepen their nce, behaviors, and/or remarks to you encounter? s? ture lessons? What would you do	

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: Integration of Technology:	Reading for information and interpretation. 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	Name	Name	Name
A – Change to Improper Fractions	B – Change to Improper Fractions	C – Change to Improper Fractions	D – Change to Improper Fractions
= 6 $^{5}/_{6}$	= $7^{3}/_{4}$	$_=4^{2}/_{5}$	= 7 ¹ / ₈
= 8 ¹ / ₂	$\{=5}^{5}/_{6}$	= 10 $^{1}/_{2}$	= 7 ⁵ / ₆
= 7 ⁵ / ₈	= 9 ⁷ / ₈	$= 3^{2}/_{9}$	= 5
= 4 ⁵ / ₉	=7	= 4 $^{1}/_{6}$	= 5 $^{3}/_{4}$
= 10 $^{1}/_{5}$	= $8^{2}/_{7}$	= $3^{3}/_{8}$	= 5 $^{1}/_{2}$
= 6 $^{1}/_{3}$	= 5 $^{4}/_{7}$	= 8 ⁵ / ₇	= 5 ⁶ / ₇
= 6 $^{3}/_{4}$	$_=4^{3}/_{8}$	= 4 ⁷ / ₈	= 6 $^{1}/_{6}$
= 2	= 8 $^{1}/_{6}$	= 9 $^{1}/_{6}$	= 9
= 9 ⁵ / ₇	= 5 $^{5}/_{8}$	= $8^{3}/_{7}$	= 6 ¹ / ₄
= 3 ⁵ / ₉	= $6^{1}/_{7}$	= 3	= 7 ¹ / ₆
= 3 ⁴ / ₅	= $7^{1}/_{4}$	= 9 $^{1}/_{3}$	= 4 ⁵ / ₈
= 4 ⁵ / ₆	= 7 ⁻⁷ / ₈	= 5 $^{1}/_{4}$	= 1 $^{5}/_{6}$

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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	Name	Name	Name
A – Change to Mixed Number	B – Change to Mixed Number	C – Change to Mixed Number	D – Change to Mixed Number
²³ / ₄ =	$^{21}/_{7} =$	⁷⁹ / ₈ =	⁵⁷ / ₈ =
⁵⁵ / ₆ =	²⁵ / ₆ =	⁶¹ / ₈ =	⁶³ / ₆ =
⁴¹ / ₆ =	⁶³ / ₈ =	²⁷ / ₄ =	²² / ₅ =
³¹ / ₄ =	²⁹ / ₉ =	⁴⁵ / ₈ =	³⁹ / ₈ =
²⁹ / ₉ =	⁴³ / ₆ =	$^{41}/_{6} =$	$^{51}/_{5} =$
²⁵ / ₆ =	⁵⁵ / ₆ =	$^{51}/_{6} =$	¹¹ / ₂ =
²⁷ / ₄ =	²³ / ₄ =	$^{21}/_4 =$	²² / ₃ =
⁶⁸ / ₇ =	$^{19}/_5 =$	¹⁹ / ₃ =	²⁷ / ₈ =
³⁹ / ₇ =	⁵⁹ / ₇ =	⁵⁸ / ₇ =	⁵⁴ / ₆ =
³⁷ / ₈ =	⁴⁹ / ₆ =	⁴³ / ₆ =	²⁸ / ₃ =
⁴⁷ / ₆ =	³⁷ / ₈ =	$^{41}/_{9} = _$	⁴³ / ₇ =
⁵⁹ / ₇ =	³⁹ / ₇ =	³⁸ / ₇ =	¹¹ / ₆ =
Prime Factorization	Greatest Common Factor	Least Common Multiple	
102	14, 22	= 18, 20	
124	24, 36	= 6, 8, 10	

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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	$5 \frac{3}{4}$	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	

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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: Date:

Subject: Math 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	✓	Summarizing and note	~	Cooperative	~	Generating and	
advance organizers		taking		learning		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/	~	Learning Centers	
		Instructions			
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	l act	ivities promoting the ab	ove	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 groupstuden	t pa	irs _ ∠ _whole grou	D	_✓_individual	
Content Chunks: How will y Transitions should be used Involve students in an and Use reflective activities to Give students time to thin Give students the opportu apply it to a real-world sit	rou d eva alysi clar k, pl nity uati	divide and teach th ery 5-15 minutes to keep s of their explorations. Fify and modify student to an, investigate and orga to expand and solidify to on.	e C p the unde anize heir	ontent? e students' brains engaged. erstanding. e collected information. • understanding of the concept and/or	
 Evaluate (Feedback/Closur Evaluate throughout the le Present students with a so What assessment(s) will be 	e) esso corir be u:	n. Are students able to ng guide (such as a rubri sed to be sure the stude	ansv ic) a nts a	wer the Essential Question(s)? t the beginning to self-assess. are successful?	
When writing 1 as a fraction numerator and denominator	n in r sh	a subtraction probl lould be? Give an e	em xar	, how do you know what the nple.	
 Describe, Analyze, Reflect: How effective was the less understanding? Cite evide support your view. What caused the lesson to What did you do to contrib What learning did you take differently next time? 	son? ence o go oute e frc	P How did the strategies of student work, perfor well? What challenges to the lesson's effective om this lesson to apply t	help mar did y enes o fu	o the students deepen their nce, behaviors, and/or remarks to you encounter? s? ture lessons? What would you do	

Date:	Time Frame: 80 minutes
Add	ling 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:	Computer Projector PowerPoint Interpretation.
integration of Technology:	
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







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:				Gr	ade	Le	vel (s)): 6		
Standards/Objectiv	es l	Address	ed (NCSCOS))						
1.04a										
Analyze computatio	Analyze computational strategies									
Essential Question((s) (In studen	t-friendly terms	5)						
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 stude	nt da	ita to plar	n. Use formative	and	l/or s	um	mative	asse	ssments.)	
Students need to ap Review and refresh	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 Instructi	iona	I Strate	gies (check a	all t	hat	ap	ply to	the	lesson)	
Identifying similarities and differences	~	Reinforcir providing	ng effort and recognition	✓	Non repr	ling ese	uistic ntation	√	Setting objectives and providing feedback	
Questions, cues, and advance organizers	~ ~	Summari: taking	zing and note	~	Coo leari	pera ning	ative J	~	Generating and testing hypotheses	
Homework and practice	•									
 Learner Diversity How will you dif 	fere	ntiate to r	neet the needs	of al	l lear	ner	s in you	ır cla	ss?	
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.					nt					
 Engage (Anticipatory Set) Capture the students' attention, stimulate their thinking and help them access prior knowledge. Consider povelty, meaning and emotion 										
Today we will learn two ways to multiply fractions by whole numbers.										
Instructional Practi	ces	Used in	this Lesson							
Coaching		~	Providing Dire	ctior	ns/	~	Learni	ng Co	enters	
Discussion		✓	Providing opportunities practice	for		~	Teache Answe	er-dii ers	rected Questions and	~
Hands-on experiences		\checkmark	Direct Instruct	ion		✓	Modeli	ing		 ✓
Presentation		v	resting				Other:	Mat	no.org	v

Suggested brained-based learning	act	ivities promoting the ab	ove	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	v	Simulations/Role Play		Other: Math6.org	v	
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 instructio	nal	detail.				
 Evaluate (Feedback/Closure Evaluate throughout the left Present students with a so What assessment(s) will the formation of the second state of the second	e) esso corir <u>be us</u> bu h	n. Are students able to ag guide (such as a rubri sed to be sure the stude now to use a spreadsh	ansv ic) a <u>nts a</u> ieet	wer the Essential Question(s)? t the beginning to self-assess. are successful? (Excel) to multiply fractions. Use	è	
this extension to complete you contrast the simplify first style to persuade your readers to er	r ha wit npla	omework or create a h multiply then simpl by the style you prefe	dou ify. r.	ble bubble map to compare and Write a persuasive paragraph to	try	
 Describe, Analyze, Reflect: How effective was the less understanding? Cite evide support your view. What caused the lesson to What did you do to contrib What learning did you take differently next time? 	son? ence go oute e fro	How did the strategies of student work, perfor well? What challenges to the lesson's effective om this lesson to apply t	help mar did y enes o fu	o the students deepen their nce, behaviors, and/or remarks to you encounter? s? ture lessons? What would you do		

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: Outcomes:	1.04a 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: Integration of Technology:	Reading for information and interpretation. 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: 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	e Level (s)	: 6			
Standards/Objectives A	ddressed (NCSCOS	5)				
1.03, 1.04a, 1.05 Compare and order rational ne factors multiples exponentia	umbers; Analyze comp	utational	strategies;	Dev	velop fluency in the use c	of
Essential Question(s) (L	a student friendly torm		011.			
For the last several assessme	nts you have been ask	ed "lfv	ou could pre	ess re	estart what would you d	0
differently to prepare for toda the changes in your lifestyle t changes to your lifestyle that	y's exam?" It is time that you will need to ac	to review hieve you have few	those answ ur goals. Ho er regrets d	ers a ow w luring	ind create a plan to make ill you implement two a examination? (action p	e lan)
Assess (Look at student data	a to plan. Use formative	e and/or	summative	asse	ssments.)	<u>un 17</u>
Examine student perform	nance on various s	kill asse	essments,	jou	rnals and projects.	
High Yield Instructional	Strategies (check	all that	apply to	the	lesson)	
Identifying similarities and differences	Reinforcing effort and providing recognition	✓ No rep	nlinguistic presentation		Setting objectives and providing feedback	
Questions, cues, and stadyance organizers t	Summarizing and note aking	Co lea	operative rning	~	Generating and testing hypotheses	
Learner Diversity How will you different	iate to meet the needs	of all lea	rners in you	r cla	ss?	
504 modifications ET and learning groups, and cor expected outcomes.	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 L	Jsed in this Lessor	n				
Coaching	✓ Providing Dire Instructions	ections/	✓ Learni	ng Ce	enters	
Discussion	Providing opportunities practice	for	✓ TeacheAnswe	er-dii ers	rected Questions and	
Hands-on experiences	Direct Instruc	tion	Modeli	ng		
Presentation	Testing		Other:	Mat	h6.org	~

Suggested brained-based learning	l act	ivities promoting the ab	ove	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 instruction	nal	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? 						
their papers in for correctio	n bỵ	y the teacher.				
 Describe, Analyze, Reflect: How effective was the less understanding? Cite evide support your view. What caused the lesson to What did you do to contribute 	son? ence go oute	P How did the strategies of student work, perfor well? What challenges to the lesson's effective	help mar did y enes	o the students deepen their nce, behaviors, and/or remarks to you encounter? s?		
 What learning did you tak differently next time? 	e fro	om this lesson to apply t	o fu	ture lessons? What would you do		

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: Outcomes:	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.				
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: Integration of Technology:	Reading for information and interpretation. 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:
Vocabulary Matching Practice
Practice Test
Fraction Readiness Quiz Bowl
Fraction Readiness MillionaireThere are many activities connected with this lesson

Name _____ Date _____ Class _____

CHAPTER Chapter Test	
Tell whether each number is divisible by 2, 3, 4, 5, 6, 9, and 10.	Write the prime factorization of each number.
1. 840	10. 45
2. 875	11. 65
3. 1,430	12. 132
Tell whether each number is prime or	Find the GCF of each set of numbers.
	13. 54 and 80
4. 4/	14. 52 and 26
5. 112	15. 30, 60, and 90
6. 61	Write each decimal as a fraction or a
List all the factors of each number.	mixed number in simplest form.
7. 49	16. 0.6
8. 100	17. 5.75
	18. 0.125
9. 144	Write each fraction or mixed number as a decimal.
	19. $\frac{3}{20}$
	20. $6\frac{1}{5}$
	21. $9\frac{11}{15}$

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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.
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.
35. $12 \cdot \frac{1}{6}$ 36. $15 \cdot \frac{1}{4}$ 37. On Monday, it snowed $11\frac{1}{2}$ inches.
36. $15 \cdot \frac{1}{4}$ Solve. 37. On Monday, it snowed $11\frac{1}{2}$ inches.
Solve. 37. On Monday, it snowed $11\frac{1}{2}$ inches.
Solve. 37. On Monday, it snowed $11\frac{1}{2}$ inches.
On Tuesday, an additional $1\frac{1}{1}$ 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 37 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
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	Address	ed (NCSCOS	5)						
1.03, 1.04a, 1.05									
Compare and order rational	numbers;	Analyze comp	utati	onal s	stra	ategies; De	evelop fluency in the u	use of	-
Factors, multiples, exponential				Izatio	n.				
Essential Question(s) (onts you	have been ask	s) 'od "	'If voi		ould pross	restart what would v	ou do	
differently to prepare for tod	lay's exar	n?" It is time t	o rev	/iew tl	hos	se answers	and create a plan to	make	
the changes in your lifestyle	that you	will need to ac	hieve	e your	gc	bals. How	will you implement tw	0	
changes to your lifestyle tha	t you will	enable you to	have	fewe	r re	egrets durii	ng examination? (acti	on pla	an)
ASSESS (Look at student da	ita to plar	n. Use formative	e and	l/or si	um	mative ass	essments.)		
Examine student perfor	mance	on concepts	revi	iew.					
High Yield Instructiona	I Strate	gies (check	all t	hat a	ap	ply to the	e lesson)		
Identifying similarities	Reinforcir	ng effort and	~	Nonl	ing	uistic	Setting objectives	~	
and differences	providing	recognition		repre	ese	ntation	and providing		
Questions, cues, and	Summari	zing and note		Соор	bera	ative	Generating and		
advance organizers	taking			learr	ning	9	testing hypotheses		
Homework and practice	Homework and practice								
Learner Diversity	atiata ta r	noot the noods	ofall	Lloarr	aor	e in vour el	2662		
		neet the needs		Tiearr		s in your ci	ass:		
504 modifications FT ar	nd RA								
Capture the students	er) s' attentio	n, stimulate th	eir th	ninkino	αa	nd help the	m access prior knowl	edae.	
Consider novelty, me	eaning an	d emotion.			9-			e ge	
Today we will assess ou	ur maste	ery of Numb	er T	heor	y a	and Fract	ions.		
Instructional Practices	Used in	this Lesson	1						
Coaching		Providing Dire	ectior	ns/	✓	Learning	Centers		
Discussion		Instructions Providing				Teacher-d	lirected Questions and	4	
		opportunities	for			Answers		-	
Hands on experiences		practice	tica			Modeline			$\left - \right $
Presentation		Testina	tion		✓	Other:			
		9							1

Suggested brained-based learning	activities promoting the ab	ove 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						
 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. 						
Evaluate (Feedback/Closure						
 Evaluate throughout the le Present students with a so What assessment(s) will b 	esson. Are students able to coring guide (such as a rubri be used to be sure the stude	answer the Essential Question(s)? c) at the beginning to self-assess. nts are successful?				
Write a paragraph evaluatio you do well on? What did y and what would you like to	on of your expected per ou have trouble with? do differently for the n	formance on this test. What did How did you prepare for this test ext exam?				
 Describe, Analyze, Reflect: How effective was the less understanding? Cite evide support your view. What caused the lesson to What did you do to contrib What learning did you take differently next time? 	son? How did the strategies ence of student work, perfor go well? What challenges bute to the lesson's effective e from this lesson to apply t	help the students deepen their mance, behaviors, and/or remarks to did you encounter? ness? o future lessons? What would you do				

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: Outcomes:	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.
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)
Integration of Reading:	Reading (vocabulary, problem solving, analyzing expectation) 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 For	cus: Improve mathematics computation and problem solving.
Related Math6.org Activities:	There are many activities connected with this lesson

Related Math6.org Activities: Vocabulary Matching Practice Practice Test Fraction Readiness Quiz Bowl Fraction Readiness Millionaire

CHAPTER Cumulat	ive Test			
4 Form B				
Choose the best and	Choose the best answer.			en as a mixed
1. Which is a prime	number?	number?		
A 12	C 51	F 3 $\frac{8}{30}$		H $3\frac{2}{25}$
B 36	D 71	G $\frac{308}{100}$		J $3\frac{1}{125}$
2. Which number is	greatest?			
F 8.402	H $8\frac{4}{5}$	9. Which 15 met	measure is ers?	equivalent to
G 8.04	J $8\frac{3}{4}$	A 150	cm	C 0.15 km
	1	B 1.5 k	۲m	D 1.5 × 10 ³ cm
3. What is the GCF	of 30, 42, and 66?	10 . What is	\$ 456.000.00	00 written in
A 2	C 6	scientif	ic notation?	
B 3	D 10	F 4.56	× 10 ⁶	H 4.56 × 10 ⁸
4. What is the value	of $8^2 \cdot 3 + 4 - 3^2$?	G 4.56	× 10 ⁷	J 4.56 × 10 ⁹
F 43	H 187	11 What is	$4\frac{1}{2}$ writter	n as an improper
G 46	J 190	fraction	12 million 12	r do un impropor
5. Which fraction is	NOT equivalent to	A $\frac{4}{12}$		C $\frac{49}{12}$
$\frac{5}{15}$?		B $\frac{48}{10}$		D $\frac{50}{2}$
A $\frac{4}{2}$	C $\frac{20}{22}$	12	_	2
- 10	- 60 - 1	12. Add $\frac{1}{9}$	$+\frac{5}{9}$.	
$\mathbf{B} \frac{10}{30}$	$D \frac{1}{3}$	F $\frac{1}{3}$	U U	H $\frac{3}{4}$
6. The area of a rec	tangle is 56 units ² .	G $\frac{2}{2}$		$J \frac{6}{42}$
Its width is 7 units length?	s. What is its	3		18
F 6 units	H 10 units	13. What is	the area of 12 cm and v	f a rectangle with
G 8 units	J 49 units	A 20 c	m	C 96 cm ²
7 What is the produ	ict of 10 and $\frac{1}{2}$?	B 40 c	m ²	D 108 cm^2
1	1		23	
$A\frac{1}{2}$	C $10\frac{1}{2}$	14. What is	$3\frac{20}{3}$ as a m	ixed number?
B 5	D 20	F 10		H $7\frac{2}{3}$
		G 10 ³ /10	<u> </u>	J $7\frac{1}{3}$

Name _____ Date _____ Class _____

CHAPTER Cumulat	ive Test			
4 Form B, co	ontinued			
15. Which set of number from least to great	pers is ordered est?	22. Which numbe for 400,000 +	r is the standard form 60,000 + 20 + 9?	
A 0.67, $\frac{2}{3}$, $\frac{7}{10}$		F 4,629	H 46,290	
$\mathbf{B} \stackrel{2}{=} \frac{7}{100} 0.67$		G 460,029	J 406,290	
3 , 10, 0.07		23 Which is a sol	ution to the equation	
C $\frac{2}{3}$, 0.67, $\frac{7}{10}$		15a = 225?		
$\mathbf{D} = \frac{7}{10} + \frac{2}{10} + 0.67$		A <i>a</i> = 5	C <i>a</i> = 15	
10, 3, 0.07		B <i>a</i> = 10	D <i>a</i> = 20	
16. Which measure is 2,257 mg?F 2.257 g	equivalent to H 0.257 kg	24. Which is a sol w + 487 = 50	ution to the equation	
G 2.257 cq	J 25.7 dq	F $w = 15$	H $w = 215$	
5	5	G $w = 105$	J $W = 989$	
17. Which is the best 105 × 68?	estimate for	25. Which is a sol $y - 67 = 31$?	ution to the equation	
A 7,000	C 700	A $y = 98$	C $y = 54$	
B 6,000	D 600	B $y = 89$	D $y = 36$	
18. Evaluate 4 <i>x</i> for <i>x</i> :	= 16.			
F 4	H 12	26. Find the missi	ng value in the table.	
G 64	J 32	<i>a</i> 3 <i>a</i> + 2		
		8 26		
19. Which number is t	he greatest?	10 ?		
A 345,678,213 B 345,697 102	C 354,087,312	F 28	H 36	
D 343,007,123	D 334,070,312	G 32	J 58	
20. Which number is f	ive million, four			
hundred twenty the	ousand, sixty-three	27. Which means	"6 less than a"?	
in standard form?		A <i>a</i> + 6	C 6a	
F 5,042,630	H 5,000,426	B <i>a</i> – 6	D a ÷ 6	
G 5,420,063	J 5,420,630	28 What is a wor	d phraso for 10r2	
21 . Which number has a 9 in the		E 10 more than r		
ten-thousands place?		G 10 less that	n r	
A 794,274	C 164,790	H the quotient	t of 10 and <i>r</i>	
B 978,054	D 874,159	J the product	of 10 and r	

Date	 Class	

CHAPTER	ר Cumulati	ve Test			
4	Form B, co	ntinued			
29. W ec A B	which value of h is quation $h - 1 = 8$ h = 6 h = 7	a solution for the 3. C $h = 8$ D $h = 9$	35.	Helen earns \$30 p paper route. So far \$3,360. For how m she had the paper A 112 B 60	er week on her she has earned any weeks has route? C 11 D 3 330
ta	ble?			D 000	D 0,000
	t ?? 8 25 9 27		36.	What is $12 \times 12 \times$ written in exponent F 12^1 G 12^3	12 × 12 × 12 ial form? H 5 ¹² J 12 ⁵
	10 29		37.	What is the value of	of $5^2 - 4^2$?
F	<i>t</i> + 14	H 2 <i>t</i> + 9		A 0	C 9
G	4 <i>t</i> – 1	J 3 <i>t</i> + 1		B 1	D 25
31. W "d A B	hat operation doe ifference" indicate addition subtraction	es the word e? C multiplication D division	38.	5(12 + a) = 5(12) example of which p F Associative G Commutative	+ 5(<i>a</i>) is an property? H Distributive J Exponential
32. W	Thich value of $y m \frac{5}{2} = 5$ true?	akes the equation	39.	What is 8.125 writt	en in words?
, F	<i>y</i> = 5	H <i>y</i> = 12		B eight and one hu	undred twenty-five
G	<i>y</i> = 11	J <i>y</i> = 20		thousandths	5
33. W pa A B	hat are the next t attern 85, 75, 65, 45, 35, 25 40, 30, 20	hree terms in the 55,? C 45, 25, 15 D 50, 45, 40		C eight thousand of twenty-fiveD eight and one hu thousandths	one hundred undred five
34. Ja ac \$3 Ja F G	ack had \$3,712 in count when he m 321. What was the ack's account? \$4,033 \$4,003	his savings hade a deposit of e new balance in H \$3,391 J \$3,400	40.	Jenna and three fri school carnival. Th 15 tickets. The tota is \$18.00. How mu ticket cost? F \$0.25 G \$0.30	ends go to the ey each buy Il for the tickets ch does each H \$0.35 J \$0.40

Date Class

CHAPTER Cumulative Test Form B, continued 4 **41.** Solve w - 12.4 = 54.7. **A** w = 42.3**C** w = 67.1

- **D** w = 84.2**B** w = 54.7
- **42.** Simplify 26 0.7. **F** 26.3 H 25.7 **G** 26.7 **J** 25.3
- **43.** Solve 7x = 65.8.

A <i>x</i> = 9	C <i>x</i> = 10.4
B <i>x</i> = 9.4	D <i>x</i> = 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?

Α	\$82.25	С	\$52.15
В	\$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		Н	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 ÷ 0.04. **F** 471 **H** 4.71 **G** 47.1 **J** 0.0471 **49.** Compare $3\frac{1}{4}$ $]3\frac{1}{5}.$ **C** = **A** > **B** < **D** not here

50. Which equation is true given x = 9?

F 9 <i>x</i> = 72	H $\frac{54}{x} = 7$
G 89 + <i>x</i> = 98	J $34 - x = 43$
Number Theory and Fractions Assessment

1	А	В	С	D
2	F	G	Н	J
3	А	В	С	D
4	F	G	Н	J
5	А	В	С	D
5	F	G	Н	J
7	А	В	С	D
8	F	G	Н	J
9	А	В	С	D
10	F	G	Н	J
11	А	В	С	D
12	F	G	Н	J
13	А	В	С	D
14	F	G	Н	J
15	А	В	С	D
16	F	G	Н	J
17	Α	В	С	D
18	F	G	Н	J
19	Α	В	С	D
20	F	G	Н	J
21	А	В	С	D
22	F	G	Н	J
23	А	В	С	D
24	F	G	Н	J
25	А	В	С	D
26	F	G	Н	J
27	А	В	С	D
28	F	G	Н	J

29	А	В	С	D
30	F	G	Н	J
31	А	В	С	D
32	F	G	Н	J
33	А	В	С	D
34	F	G	Н	J
35	А	В	С	D
36	F	G	Н	J
37	А	В	С	D
38	F	G	Н	J
39	А	В	С	D
40	F	G	Н	J
41	Α	В	С	D
42	F	G	Н	J
43	А	В	С	D
44	F	G	Н	J
45	А	В	С	D
46	F	G	Н	J
47	А	В	С	D
48	F	G	Н	J
49	А	В	С	D
50	F	G	Н	J

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

Name

J

29	А	В	С	D
30	F	G	Н	J
31	А	В	С	D
32	F	G	Н	J
33	А	В	С	D
34	F	G	Н	J
35	А	В	С	D
36	F	G	Н	J
37	Α	В	С	D
38	F	G	Н	J
39	А	В	С	D
40	F	G	Н	J
41	А	В	С	D
42	F	G	Н	J
43	А	В	С	D
44	F	G	Н	J
45	Α	В	С	D
46	F	G	Н	J
47	А	В	С	D
48	F	G	Н	J
49	А	В	С	D
50	F	G	Н	J

Number Theory and Fractions Assessment

1	А	В	С	
2	F	G		J
3	А	В		D
4	F	G		J
5		В	С	D
6	F		Н	J
7	А		С	D
8	F	G		J
9	А	В	С	
10	F	G		J
11	Α	В		D
12	F		Н	J
13	А	В		D
14	F	G		J
15	А	В		D
16		G	Н	J
17		В	С	D
18	F		Н	J
19	А	В	С	
20	F		Н	J
21		В	С	D
22	F		Н	J
23	А	В		D
24		G	Н	J
25		В	С	D
26	F		Н	J
27	А		С	D
28	F	G	Н	

29	А	В	С	
30	F	G		J
31	Α		С	D
32	F		Н	J
33		В	С	D
34		G	Н	J
35		В	С	D
36	F	G	Н	
37	А	В		D
38	F	G		J
39	А		С	D
40	F		Н	J
41	А	В		D
42	F	G	Н	
43	А		С	D
44	F		Н	J
45	А		С	D
46	F		Н	J
47	А		С	D
48		G	Н	J
49		В	С	D
50	F		Н	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%