

# Math6.org Activities for Geometry

## Vocabulary Studies

- \_\_\_1) Word Search
- \_\_\_2) Online Word Search
- \_\_\_3) Print Flash Cards (62 Cards)
- \_\_\_4) Online Flash Cards
  - \_\_\_ Lines
  - \_\_\_ Angles
  - \_\_\_ Triangles
  - \_\_\_ Quadrilaterals
  - \_\_\_ Polygons
  - \_\_\_ Transformations
  - \_\_\_ Geometric Vocabulary (All)
- \_\_\_5) 3 Column Notes
- \_\_\_6) Crossword Puzzle
- \_\_\_7) Hangman
- \_\_\_8) Gap Fill Paragraphs
  - \_\_\_ Cheating on the Lines Test
  - \_\_\_ Audacious Angles
  - \_\_\_ The Great Polygon Battle
  - \_\_\_ Maniac Mathematicians
- \_\_\_9) Matching Practices
  - \_\_\_ Lines
  - \_\_\_ Angles
  - \_\_\_ Triangles
  - \_\_\_ Quadrilaterals
  - \_\_\_ Transformations
  - \_\_\_ Geometric Vocabulary (All)
- \_\_\_10) Lines Millionaire
- \_\_\_11) Angles Millionaire
- \_\_\_12) Polygons Millionaire
- \_\_\_13) Geometric Vocabulary Millionaire

## Activities by Lesson

### 7.1 Points, Lines and Planes

- \_\_\_14) Review Worksheet
- \_\_\_15) Vocabulary Matching - Linear Geometry
- \_\_\_16) Gap Fill - Cheating on the Lines Test
- \_\_\_17) Lesson Quiz
- \_\_\_18) \*\*Use Word to Create Points
- \_\_\_19) \*\*Lines Millionaire

### 7.2 Angles

- \_\_\_20) Review Worksheet
- \_\_\_21) Vocabulary Matching - Angles
- \_\_\_22) Gap Fill - Audacious Angles
- \_\_\_23) Classify Angles Drill
- \_\_\_24) Measure Angles Drill
- \_\_\_25) Lesson Quiz
- \_\_\_26) \*\*Pie Charts

### 7.3 Angle Relationships

- \_\_\_27) Review Worksheet
- \_\_\_28) Vocabulary Matching - Angles
- \_\_\_29) Gap Fill - Audacious Angles
- \_\_\_30) Angle Relationships (GP)
- \_\_\_31) Lesson Quiz
- \_\_\_32) \*\*Angles Millionaire

### 7.4 Classifying Lines

- \_\_\_33) Review Worksheet
- \_\_\_34) Vocabulary Matching - Linear Geometry
- \_\_\_35) Gap Fill - Cheating on the Lines Test
- \_\_\_36) Lesson Quiz
- \_\_\_37) \*\*Use Word to Draw Lines
- \_\_\_38) \*\*Lines Millionaire

### 7.5 Triangles

- \_\_\_39) Review Worksheet
- \_\_\_40) Vocabulary Matching - Triangles
- \_\_\_41) Classify Triangles Drill
- \_\_\_42) Triangles Computation Drill
- \_\_\_43) Lesson Quiz
- \_\_\_44) \*\*The Pythagorean Theorem

### 7.6 Quadrilaterals

- \_\_\_45) Review Worksheet
- \_\_\_46) Vocabulary Matching - Quadrilaterals
- \_\_\_47) Lesson Quiz
- \_\_\_48) \*\*The Coordinate Plane

### 7.7 Polygons

- \_\_\_49) Review Worksheet
- \_\_\_50) The Policeman and the Great Polygon Battle
- \_\_\_51) Regular Polygons Drill
- \_\_\_52) Lesson Quiz
- \_\_\_53) \*\*Diagonals Formula

### 7.8 Geometric Patterns

- \_\_\_54) Review Worksheet
- \_\_\_55) Lesson Quiz
- \_\_\_56) \*\*Polygon Angles Pattern

### 7.9 Congruence

- \_\_\_57) Review Worksheet
- \_\_\_58) Lesson Quiz
- \_\_\_59) \*\*Faces of Congruence

### 7.10 Transformations

- \_\_\_60) Review Worksheet
- \_\_\_61) Transformations Matching
- \_\_\_62) Degrees of Rotation Drill
- \_\_\_63) Lesson Quiz
- \_\_\_64) \*\*Graphing Transformations

### 7.11 Symmetry

- \_\_\_65) Review Worksheet
- \_\_\_66) Lesson Quiz
- \_\_\_67) \*\*Symmetry Venn Diagram

### 7.12 Tessellations

- \_\_\_68) Review Worksheet
- \_\_\_69) Lesson Quiz
- \_\_\_70) \*\*Tessellation Problems

## Test and Games

- \_\_\_71) Angle Relationships Millionaire
- \_\_\_72) Mid Chapter Quiz
- \_\_\_73) Quiz Bowl
- \_\_\_74) Practice Test
- \_\_\_75) Geometry Millionaire

## Word List – 3 Column Notes

Word	Definition	Example
acute angle	An angle that measures less than $90^\circ$	
acute triangle		
adjacent angles		
angle		
bisect		
compass		
complementary angles		
congruent		
equilateral		
isosceles		
line		
line of reflection		
line of symmetry		
obtuse angle		
obtuse triangle		
parallel		
parallelogram		
perpendicular		
plane		
point		
polygon		
quadrilateral		
ray		
rectangle		

Name \_\_\_\_\_

## Word List – 3 Column Notes

reflection		
regular polygon		
rhombus		
right angle		
right triangle		
rotation		
scalene		
segment		
skew		
square		
straight angle		
supplementary angles		
symmetry		
tessellation		
transformation		
translation		
trapezoid		
vertex		
vertical angles		

You will need to copy this onto **your own paper** to make proper 3 column notes.

## Math Journal - Chapter 7 - Plane Geometry

- 7.01 The Math6.org extension for this lesson (7.1) will show you how to create points using Microsoft Word. This skill will teach you advanced Word techniques including; formatting auto shapes and text boxes, creating invisible text boxes, advanced layout techniques and grouping objects. You should complete that activity **or** Create a Poster - Draw a set of intersecting lines, then label 5 points. Record 2 lines, 2 line segments, 4 rays and name the plane.
- 7.02 Create a poem or simple saying that will help your classmates to remember acute, right, obtuse and straight.
- 7.03 Write a mystery narrative that brings the reader to the compute the measure of an unknown complementary or supplementary angle.
- 7.04 The Math6.org extension for this lesson (7.4) will show you how to create lines and rays using Microsoft Word. This skill will teach you advanced Word techniques including; formatting auto shapes and text boxes, creating invisible text boxes, advanced layout techniques and grouping objects. You should complete that activity **or** Draw and label intersecting, parallel and perpendicular line sets. Write a short description (as a caption) for each drawing.
- 7.05 Draw an example of each of the 6 types of triangles. Write a short caption explaining why the triangle meets the conditions of the classification.
- 7.06 Hold a quadrilateral beauty pageant. Draw an example of each of the special quadrilaterals and have 15 of your friends judge the show. Graph your results please.
- 7.07 Use a protractor and a ruler to draw "perfect" examples of a regular triangle ( $60^\circ$ ), a square ( $90^\circ$ ), a hexagon ( $120^\circ$ ). If you dare to try a pentagon ( $108^\circ$ ), I will be impressed.
- 7.08 Create your own geometric pattern with a multiple choice answer. \*Make sure your foils are reasonable choices\*
- 7.09 Explain how to tell whether two polygons are congruent. Write clear instructions that can be followed by a fourth or fifth grader \*I may test it on them!\*
- 7.10 The extension (7.10) @ Math6.org today is very important. It will give you practice with transformations on the coordinate plane. (very often a tested skill) Please complete that **or** use a coordinate plane to draw an example of each of the transformations. You should show horizontal, vertical and diagonal translations, horizontal and vertical reflections and rotations of  $90^\circ$ ,  $180^\circ$ .
- 7.11 Write a paragraph to describe how you determine whether a figure has horizontal, vertical or diagonal line symmetry. Use examples and graphics.
- 7.12 Using 3 different polygons - create a pattern that can tessellate the plane. Enjoy yourself and be colorful!

# **Math Objectives**

## **3.01**

Identify and describe the intersection of figures in a plane.

Instructor: \_\_\_\_\_  
Subject: Math Grade 6

Time Frame: **80 minutes**  
Date: \_\_\_\_\_

### Points, Lines and Planes

Essential Question: You have are going to tutor someone in Geometry. Would you rather help them to understand that there are an infinite number of points in a line and an infinite number of points in a ray so neither is larger than the other or would you rather help them to understand why ray AB is congruent to but not equal to ray BA?

Objective (s) Numbers: **3.01**

Outcomes: Identify and describe the intersection of figures in a plane.

Materials: Textbook pages 322-325, rulers or protractors

Anticipatory Set: Today we will learn about decimal values and comparing and ordering decimals.

### During the Lesson

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

Integration of Reading: Reading for information and interpretation.

Integration of Technology: Computer, Projector, PowerPoint, Internet

Modeling: Today we will learn to identify, label and draw points, lines and planes.

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

Guided Practice: Discuss, define and model vocabulary {point, line, collinear, plane, line segment, ray}

### After the Lesson

Independent Practice Text page 324 - 325 (1–21, 25–30 4–30)  
**AIG:** {4–30}  
Assign workbook page 7.1

Closure / Assessment: The Math6.org extension for this lesson (7.1) will show you how to create points using Microsoft Word. This skill will teach you advanced Word techniques including; formatting auto shapes and text boxes, creating invisible text boxes, advanced layout techniques and grouping objects. You should complete that activity or Create a Poster - Draw a set of intersecting lines, then label 5 points. Record 2 lines, 2 line segments, 4 rays and name the plane.

Reflection:

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

**Related Math6.org Activities:** There are **8** activities connected with this lesson.

Vocabulary Matching - Linear Geometry

Gap Fill - Cheating on the Lines Test

**\*\*Use Word to Create Points**

**\*\*Lines Millionaire**

# **Math Objectives**

## **2.01**

Estimate and measure length, perimeter, area, angles, weight, and mass of two- and three-dimensional figures using appropriate tools

Instructor: \_\_\_\_\_  
Subject: Math Grade 6

Time Frame: **80 minutes**  
Date: \_\_\_\_\_

### Angles

Essential Question: You will be expected to **estimate** the measures of various acute and obtuse angles on your EOG and will not be allowed to use a protractor. Can you develop a plan to help your classmates estimate angle measures without using a protractor?

Objective (s) Numbers: **2.01**  
Outcomes: Estimate and measure length, perimeter, area, angles, weight, and mass of two- and three-dimensional figures using appropriate tools

Materials: Textbook pages 326-331, protractors

Anticipatory Set: Today we will learn classify and measure and construct angles.

Presentation of Information:

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

Modeling: Discuss, define and model vocabulary {angle, vertex, acute angle, right angle, obtuse angle, straight angle and protractor}

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

Guided Practice: Model and practice drawing and measuring various angles using a protractor. Make sure the students are correctly labeling their responses.

### After the Lesson

Independent Practice Text page 328 - 329 {1-7, 11-24}  
**AIG:** {11-24, 32-38}  
Assign workbook page 7.2

Closure / Assessment: Create a poem or simple saying that will help your classmates to remember acute, right, obtuse and straight.

Reflection:

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

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

Vocabulary Matching - Angles

Gap Fill - Audacious Angles

Classify Angles Drill

Measure Angles Drill

**\*\*Pie Charts**



# Math Objectives

## 3.01

Identify and describe the intersection of figures in a plane.

Instructor: \_\_\_\_\_  
Subject: Math Grade 6

Time Frame: **80 minutes**  
Date: \_\_\_\_\_

### Angle Relationships

Essential Question: Has it been easier for you to remember that complimentary angles add up to  $90^\circ$  or that supplementary angles add up to  $180^\circ$ . Try to explain why you think this happened to you?

Objective (s) Numbers: **3.01**  
Outcomes: Identify and describe the intersection of figures in a plane.

Materials: Textbook pages 332-335, 7.3 Practice B, rulers, protractors  
Anticipatory Set: Today we examine special angle relationships that will help to solve problems.

### During the Lesson

Presentation of Information:  
Integration of Other Subjects: Writing (narrative)  
Reading (vocabulary, problem solving, analyzing expectation)

Integration of Reading: Reading for information and interpretation.  
Integration of Technology: Computer, Projector, PowerPoint, Internet

Modeling: Discuss, define and model vocabulary {congruent, vertical angles, adjacent angles, complementary angles, supplementary angles}

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

Guided Practice: Use 7.3 Practice B to practice classifying and identifying unknown angle measures.

### After the Lesson

Independent Practice Text page 334 - 335 {1–24, 31–32}  
**AIG:** {7–32}  
Assign workbook page 7.3

Closure / Assessment: Write a mystery narrative that brings the reader to the compute the measure of an unknown complementary or supplementary angle.

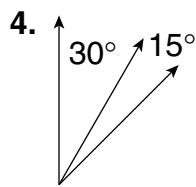
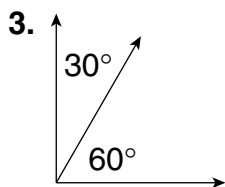
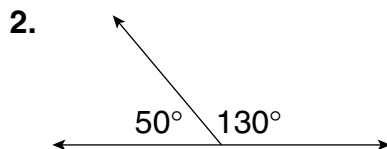
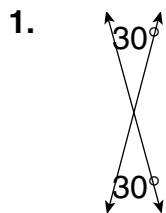
Reflection:

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

**Related Math6.org Activities:** There are **8** activities connected with this lesson  
Vocabulary Matching - Angles  
Gap Fill - Audacious Angles  
**Angle Relationships Guided Practice**  
\*\*Angles Millionaire

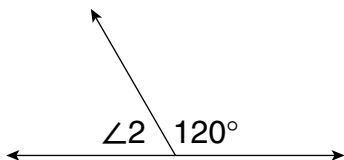
**LESSON**  
**7-3** **Practice B**  
**Angle Relationships**

Identify the type of each angle pair shown.

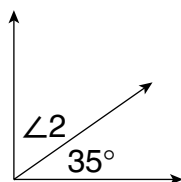


Find each unknown angle measure.

5. The angles are supplementary.



6. The angles are complementary.



7. Anita says the plus sign + forms 2 pairs of vertical angles. Charles says it forms 2 pairs of congruent angles. Who is correct? Explain.

8. Is the following statement always true, sometimes true, or never true? Explain your reasoning. Two congruent angles that are complementary both measure  $45^\circ$ .

# **Math Objectives**

## **2.01**

Estimate and measure length, perimeter, area, angles, weight, and mass of two- and three-dimensional figures using appropriate tools.

Instructor: \_\_\_\_\_  
Subject: Math Grade 6

Time Frame: **80 minutes**  
Date: \_\_\_\_\_

### Classifying Lines

Essential Question:	Skew lines are noncoplanar lines. This makes them very difficult to model on the plane that is made by the page of your text book or test. The models must appear 3D and this is a dead giveaway that you are modeling skew lines. Can you develop a way to test your classmates understanding of skew lines without using the "giveaway" models?
Objective (s) Numbers:	<b>2.01</b>
Outcomes:	Estimate and measure length, perimeter, area, angles, weight, and mass of two- and three-dimensional figures using appropriate tools.
Materials:	Textbook pages 336-343, Consumer and Career Math 7-4
Anticipatory Set:	Today we will learn to classify line pairs.

### During the Lesson

Presentation of Information:	
Integration of Other Subjects:	Writing (summary) Reading (vocabulary, problem solving, analyzing expectation)
Integration of Reading:	Reading for information and interpretation.
Integration of Technology:	Computer, Projector, PowerPoint, Internet
Modeling:	Discuss, define and model vocabulary {parallel lines, perpendicular lines, skew lines}
Differentiation:	504 modifications ET and RA. Additional student and teacher modeling will help to guide all students to reach expected outcomes.
Guided Practice:	1. Model drawing and identifying the various line choices. 2. Create a Venn Diagram to compare and contrast the classifications.

### After the Lesson

Independent Practice	Text page 338 - 339 {1-2, 4-5, 7-11, 13, 24-32} <b>AIG:</b> {11-19, 21, 24-32} <i>Consumer and Career Math 7-4</i>
Closure / Assessment:	The Math6.org extension for this lesson (7.4) will show you how to create lines and rays using Microsoft Word. This skill will teach you advanced Word techniques including; formatting auto shapes and text boxes, creating invisible text boxes, advanced layout techniques and grouping objects. You should complete that activity or Draw and label intersecting, parallel and perpendicular line sets. Write a short description (as a caption) for each drawing.
Reflection:	
Integration with School-wide Focus:	Improve mathematics computation and problem solving.

**Related Math6.org Activities:** There are **8** activities connected with this lesson

Vocabulary Matching - Linear Geometry

Gap Fill - Cheating on the Lines Test

**\*\*Use Word to Draw Lines**

**\*\*Lines Millionaire**

**LESSON**
**7-4**

# Consumer Math

## Gardening

Planning and planting a vegetable garden can be a fun experience. It is always nice to have summer vegetables available to be picked fresh from the backyard. It also saves the consumer money since grocery stores usually charge a premium for these items.

Use the diagram to answer each exercise.



- Johnny purchased five tomato plants. Each plant costs \$1.65. How much did he spend for the tomato plants?  
\_\_\_\_\_
- Green beans should be planted next to a lattice so the plants have something to climb. Johnny decides to plant them along one edge of the garden. Is the line of beans perpendicular or parallel to the other vegetables in the garden? Which group of vegetables intersect with the beans?  
\_\_\_\_\_
- Johnny planted 4 pepper plants in his garden. Each plant cost \$1.35. Peppers cost \$0.50 each at the grocery store. If his plants produce 45 peppers over the season, how much money does Johnny save by growing the peppers himself rather than buying them at the store?  
\_\_\_\_\_
- Which group(s) of vegetables are planted parallel to each other?  
\_\_\_\_\_
- Cucumber plants need a great deal of room to grow since their vines spread. Describe the line of cucumber plants in relation to the other plants in the garden.  
\_\_\_\_\_

## LESSON

**Consumer Math****7-4****Gardening**

Planning and planting a vegetable garden can be a fun experience. It is always nice to have summer vegetables available to be picked fresh from the backyard. It also saves the consumer money since grocery stores usually charge a premium for these items.

Use the diagram to answer each exercise.



1. Johnny purchased five tomato plants. Each plant costs \$1.65. How much did he spend for the tomato plants?

**\$8.25**

2. Green beans should be planted next to a lattice so the plants have something to climb. Johnny decides to plant them along one edge of the garden. Is the line of beans perpendicular or parallel to the other vegetables in the garden? Which group of vegetables intersect with the beans?

**perpendicular; tomato plants**

3. Johnny planted 4 pepper plants in his garden. Each plant cost \$1.35. Peppers cost \$0.50 each at the grocery store. If his plants produce 45 peppers over the season, how much money does Johnny save by growing the peppers himself rather than buying them at the store?

**\$17.10**

4. Which group(s) of vegetables are planted parallel to each other?

**tomatoes, peppers, lettuce**

5. Cucumber plants need a great deal of room to grow since their vines spread. Describe the line of cucumber plants in relation to the other plants in the garden.

**They form a skew line.**

# Math Objectives

## 3.01

Identify and describe the intersection of figures in a plane.



Instructor: \_\_\_\_\_  
Subject: Math Grade 6

Time Frame: **80 minutes**  
Date: \_\_\_\_\_

### Triangles

Essential Question: Draw an example of a scalene, right and equilateral triangle. Can you tell me which triangle you find the most appealing and do you have any ideas as to why that triangle is more appealing to you than the others?

Objective (s) Numbers: **3.01**  
Outcomes: Identify and describe the intersection of figures in a plane.

Materials: Textbook pages 344-347  
Anticipatory Set: Today we will learn to classify triangles and solve problems involving angle and side measures of triangles.

### During the Lesson

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

Modeling: Discuss, define and model vocabulary {quadrilateral, parallelogram, rectangle, rhombus, square, trapezoid}

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

Guided Practice: 1. Model classifying triangles using side lengths.  
2. Model classifying triangles using angle measures.  
3. Practice using angle measures to declare impossible triangles.

### After the Lesson

Independent Practice Text page 346 - 347 {1–3, 6–8, 11, 13, 28–36}  
**AIG:** {1–3, 6–8, 25, 26, 28–36}  
Assign workbook page 7.5

Closure / Assessment: Draw an example of each of the 6 types of triangles. Write a short caption explaining why the triangle meets the conditions of the classification.

Reflection:

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

**Related Math6.org Activities:** There are **8** activities connected with this lesson  
Vocabulary Matching - Triangles  
Classify Triangles Drill  
Triangles Computation Drill  
**\*\*The Pythagorean Theorem**

# Math Objectives

## 3.01

Identify and describe the intersection of figures in a plane.

Instructor: \_\_\_\_\_  
Subject: Math Grade 6

Time Frame: **80 minutes**  
Date: \_\_\_\_\_

### Quadrilaterals

Essential Question: How could you use the application of logical reasoning to help your classmates understand geometric relationships between squares and quadrilaterals? (action plan)

Objective (s) Numbers: **3.01**  
Outcomes: Identify and describe the intersection of figures in a plane.

Materials: Textbook pages 348-351  
Anticipatory Set: Today we will learn to identify, classify and compare quadrilaterals.

### During the Lesson

Presentation of Information:  
Integration of Other Subjects: Writing (presentation)  
Reading (vocabulary, problem solving, analyzing expectation)

Integration of Reading: Reading for information and interpretation.  
Integration of Technology: Computer, Projector, PowerPoint, Internet

Modeling: Discuss, define and model vocabulary {quadrilateral, parallelogram, rectangle, rhombus, square, trapezoid}

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

Guided Practice: 1. Create a tree map to organize each type of quadrilateral.  
2. Examine the relationship between squares, rhombuses and rectangles.  
3. Practice finding the 4th angle in a quadrilateral when 3 angles are known.

### After the Lesson

Independent Practice Text page 122 -123 {1–25, 38–39, 45–50}  
**AIG:** {18–50}  
Assign workbook page 7.6

Closure / Assessment: Hold a quadrilateral beauty pageant. Draw an example of each of the special quadrilaterals and have 15 of your friends (aka classmates) judge the show. Graph your results please.

Reflection:

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

**Related Math6.org Activities:** There are 6 activities connected with this lesson

Vocabulary Matching - Quadrilaterals

**\*\*The Coordinate Plane**

# Math Objectives

## 3.01

Identify and describe the intersection of figures in a plane.

Instructor: \_\_\_\_\_  
Subject: Math Grade 6

Time Frame: **80 minutes**  
Date: \_\_\_\_\_

### Polygons

**Essential Question:** Over the next couple of days you will learn about polygons and geometric patterns. As you learn about these, consider the following and develop a plan to answer it. How can geometric properties be used to prove relationships between the angles and sides of a polygon? (action plan)

**Objective (s) Numbers:** **3.01**  
**Outcomes:** Identify and describe the intersection of figures in a plane.

**Materials:** Textbook pages 352-355

**Anticipatory Set:** Today we will learn to identify regular and non regular polygons and to find the angle measures of regular polygons.

### During the Lesson

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

**Modeling:** Discuss, define and model vocabulary {polygon, regular polygon, diagonals}

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

**Guided Practice:**  
1. Draw examples and non examples of polygons.  
2. Discuss regular polygons - Complete the Regular Polygons Drill (together)

### After the Lesson

**Independent Practice** Text page 354 - 355 {1–19, 23–29}  
**AIG:** {4–29}  
Assign workbook page 7.7

**Closure / Assessment:** Use a protractor and a ruler to draw "perfect" examples of a regular triangle (60o), a square (90o), a hexagon (120o). If you dare to try a pentagon (108o), I will be impressed.

**Reflection:**

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

**Related Math6.org Activities:** There are **7** activities connected with this lesson  
The Policeman and the Great Polygon Battle  
Regular Polygons Drill  
**\*\*Diagonals Formula**

# **Math Objectives**

**3.04**

Solve problems involving geometric figures in the coordinate plane.

Instructor: \_\_\_\_\_  
Subject: Math Grade 6

Time Frame: **80 minutes**  
Date: \_\_\_\_\_

### Geometric Patterns

Essential Question: How can geometric properties be used to prove relationships between the angles and sides of a polygon? (action plan)

Objective (s) Numbers: **3.04**  
Outcomes: Solve problems involving geometric figures in the coordinate plane.

Materials: Textbook pages 356-361, 7.8 Practice A and B  
Anticipatory Set: Today we will learn to recognize, describe and extend geometric patterns.

### During the Lesson

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

Integration of Reading: Reading for information and interpretation.  
Integration of Technology: Computer, Projector, PowerPoint, Internet

Modeling: North Carolina likes to test your knowledge of geometric shapes and figures by making you identify a pattern. This way they can test your knowledge about many aspects of geometric figures in one question. The pattern can be based on shape, color, size, position, or number. Before you can discover the missing figure in a pattern, you first have to recognize a relationship among the figures. As with pattern problems involving numbers, a table is often the best way to organize your thoughts and approach.

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

Guided Practice: Complete 7.8 Practice A and B together.

### After the Lesson

Independent Practice Text page 358 - 359 {1–2, 4–5, 7, 9, 12–15}  
**AIG:** {1–2, 4–5, 7–9, 11–15}  
Assign workbook page 7.8

Closure / Assessment: Create your own geometric pattern with a multiple choice answer. \*Make sure your foils are reasonable choices\*

Reflection:

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

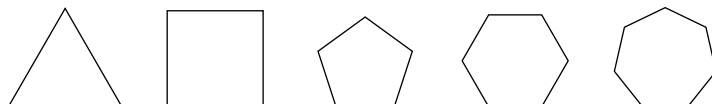
**Related Math6.org Activities:** There are **5** activities connected with this lesson

**\*\*Polygon Angles Pattern**

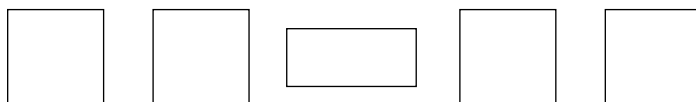
**LESSON**  
**7-8** **Practice A**  
**Geometric Patterns**

Identify a possible pattern. Use the pattern to draw the next figure.

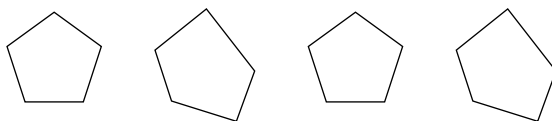
1.



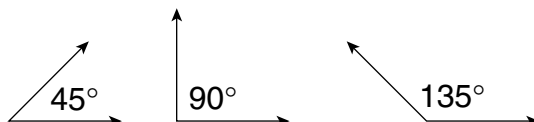
2.



3.



4.



5. Look around your classroom. Describe a geometric pattern you see.

6. Use squares to create a geometric pattern. Describe your pattern.



**LESSON**  
**7-8** **Practice B**  
**Geometric Patterns**

Identify a possible pattern. Use the pattern to draw the next figure.

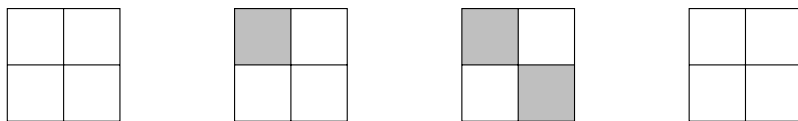
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2.




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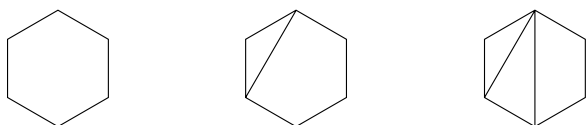
3.




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4.




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5. Use triangles to create a geometric pattern. Describe your pattern.

---

---

# **Math Objectives**

**3.04**

Solve problems involving geometric figures in the coordinate plane.

Instructor: \_\_\_\_\_  
Subject: Math Grade 6

Time Frame: **80 minutes**  
Date: \_\_\_\_\_

### **Congruence**

Essential Question: For the remainder of this unit, we will study geometric figures and how they are related and transformed. During this time you are to consider the following and try to develop a plan to answer it. How can the properties of geometric figures be verified using the coordinate plane?

Objective (s) Numbers: **3.04**  
Outcomes: Solve problems involving geometric figures in the coordinate plane.

Materials: Textbook pages 362-364

Anticipatory Set: Today we will learn to identify congruent figures and use congruence to solve problems.

### **During the Lesson**

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

Modeling: Figures are congruent if they have the exact same size and shape. Your Math Book is probably congruent to your neighbors, but I doubt that is congruent to your Science book. Congruence is true no matter what the positioning of a figure – so you must be careful to locate the correctly corresponding sides and angles to prove it.

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

Guided Practice: Draw and cut out congruent and non congruent shapes. Rotating the shapes and see if you neighbor can still identify congruence.

### **After the Lesson**

Independent Practice Text page 362 - 363 {1–8, 11–17}  
**AIG:** {3-17}  
Assign workbook page 7.9

Closure / Assessment: Explain how to tell whether two polygons are congruent. Write clear instructions that can be followed by a fourth or fifth grader \*I may test it on them!\*

Reflection:

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

**Related Math6.org Activities:** There are **5** activities connected with this lesson

**\*\*Faces of Congruence**

# Math Objectives

## 3.03, 3.04

Transform figures in the coordinate plane and describe the transformation; Solve problems involving geometric figures in the coordinate plane.

Instructor: \_\_\_\_\_  
Subject: Math Grade 6

Time Frame: **80 minutes**  
Date: \_\_\_\_\_

### Transformations

Essential Question: For the remainder of this unit, we will study geometric figures and how they are related and transformed. During this time you are to consider the following and try to develop a plan to answer it. How can the properties of geometric figures be verified using the coordinate plane?

Objective (s) Numbers: **3.03, 3.04**  
Outcomes: Transform figures in the coordinate plane and describe the transformation; Solve problems involving geometric figures in the coordinate plane.

Materials: Textbook pages 365-368, coordinate planes

Anticipatory Set: Today we will learn to use translations, reflections and rotations to transform geometric shapes.

### During the Lesson

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

Integration of Reading: Reading for information and interpretation.

Integration of Technology: Computer, Projector, PowerPoint, Internet

Modeling: Discuss, define and model vocabulary {transformation, translation, rotation, reflection, line of reflection, vertical, horizontal}

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

Guided Practice: 1. Discuss rotation, clockwise and counterclockwise. Practice using a protractor to identify degrees and direction of rotations.  
2. Practice transformations on the coordinate plane. Have the students carefully examine the resulting ordered pairs.

### After the Lesson

Independent Practice Text page 367 - 368 {1–16. 21–27}  
**AIG:** {5–27}  
Assign workbook page 7.10

Closure / Assessment: The extension (7.10) @ Math6.org today is very important. It will give you practice with transformations on the coordinate plane. (very often a tested skill) Please complete that or use a coordinate plane to draw an example of each of the transformations. You should show horizontal, vertical and diagonal translations, horizontal and vertical reflections and rotations of 90o, 180o.

Reflection:

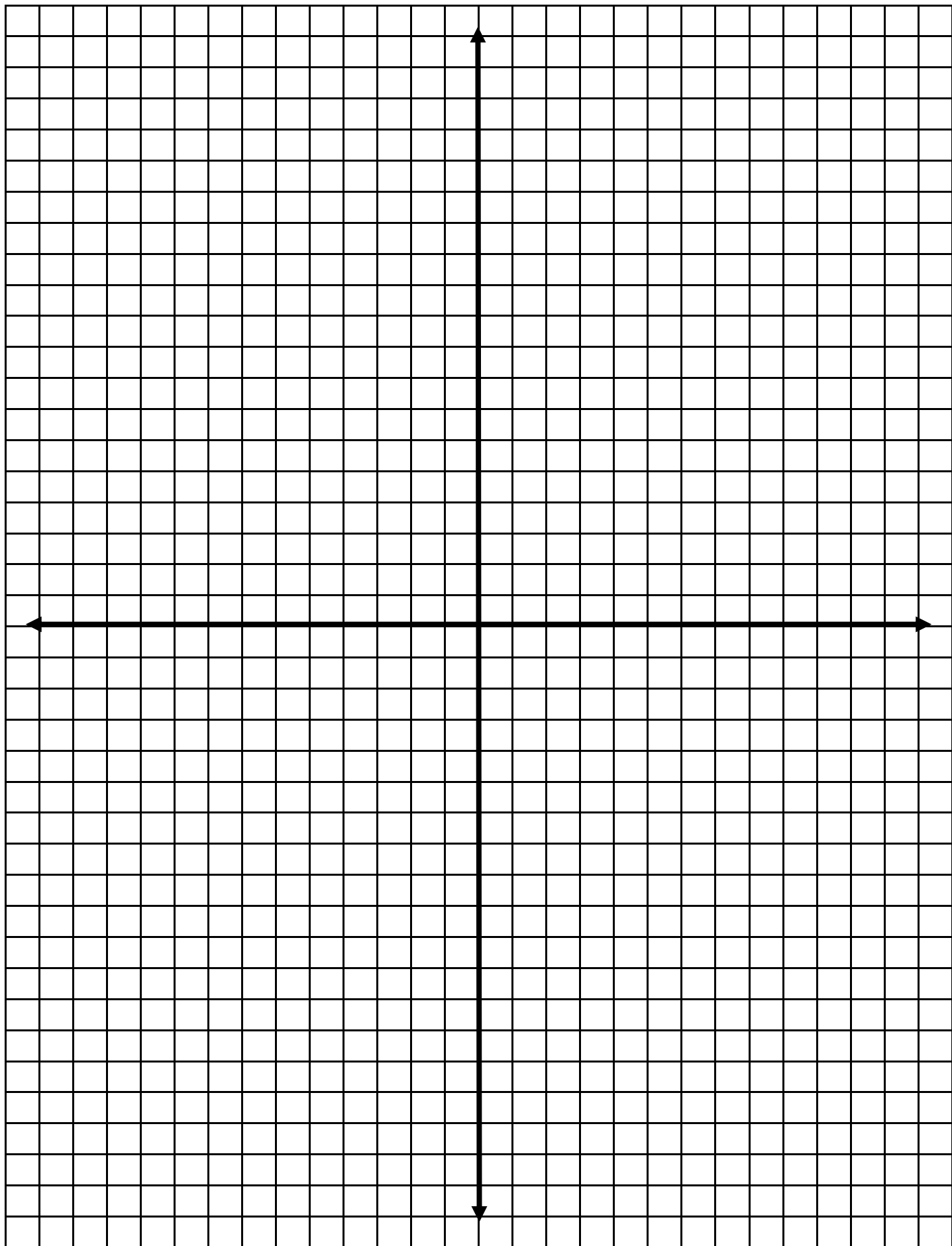
Integration with School-wide Focus: Improve mathematics computation and problem solving.

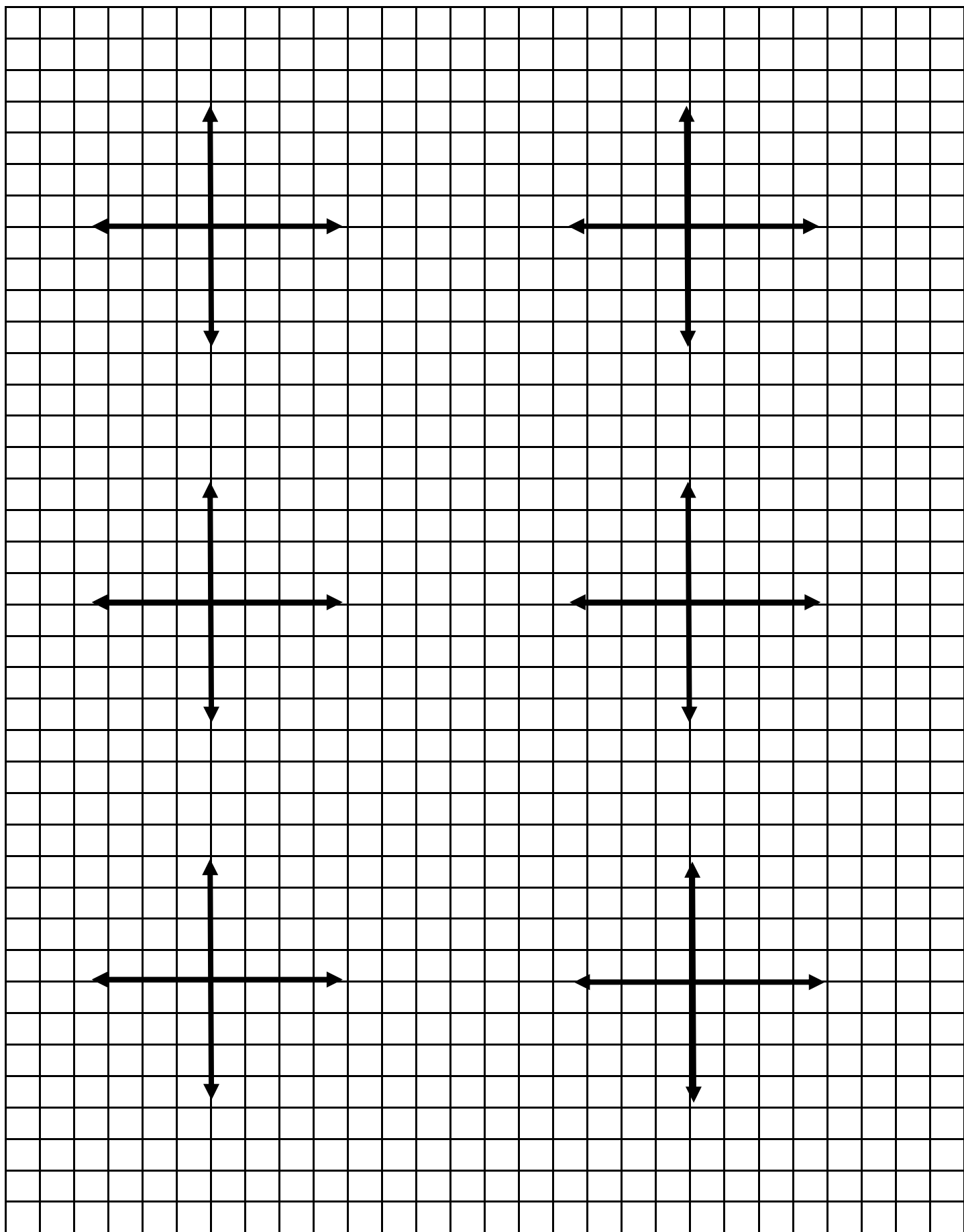
**Related Math6.org Activities:** There are **7** activities connected with this lesson

Transformations Matching

Degrees of Rotation Drill

**\*\*Graphing Transformations**





# Math Objectives

## 3.01

Identify and describe the intersection of figures in a plane.



Instructor: \_\_\_\_\_  
Subject: Math Grade 6

Time Frame: **80 minutes**  
Date: \_\_\_\_\_

### Symmetry

Essential Question:	For the remainder of this unit, we will study geometric figures and how they are related and transformed. During this time you are to consider the following and try to develop a plan to answer it. How can the properties of geometric figures be verified using the coordinate plane?
Objective (s) Numbers:	<b>3.01</b>
Outcomes:	Identify and describe the intersection of figures in a plane.
Materials:	Textbook pages 369-372, Reteaching 7.11
Anticipatory Set:	Today we will learn to identify line symmetry.

### During the Lesson

Presentation of Information:	
Integration of Other Subjects:	Writing (sequencing/how to) Reading (vocabulary, problem solving, analyzing expectation)
Integration of Reading:	Reading for information and interpretation.
Integration of Technology:	Computer, Projector, PowerPoint, Internet
Modeling:	Discuss, define and model vocabulary {symmetry, line of symmetry, vertical, horizontal, rotational}
Differentiation:	504 modifications ET and RA. Additional student and teacher modeling will help to guide all students to reach expected outcomes.
Guided Practice:	1. A figure has line symmetry if it can be folded or reflected so that the two overlapping parts of the figure are congruent. The line of reflection is called the line of symmetry. 2. Complete and discuss Reteaching 7.11 3. Make sure the students understand that rectangles do not have diagonal symmetry - the triangles are congruent but they are not foldable.

### After the Lesson

Independent Practice	Text page 371 - 372 {1-6, 9-14, 17, 21-26} <b>AIG:</b> {2-6, 9-14, 17, 18, 21-26} Assign workbook page 7.11
Closure / Assessment:	Write a paragraph to describe how you determine whether a figure has horizontal, vertical or diagonal line symmetry. Use examples and graphics.
Reflection:	
Integration with School-wide Focus:	Improve mathematics computation and problem solving.

**Related Math6.org Activities:** There are **5** activities connected with this lesson

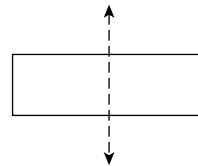
**\*\*Symmetry Venn Diagram**

# **LESSON** **7-11** **Reteach** **Symmetry**

A figure has line symmetry if it can be folded or reflected so that the two overlapping parts of the figure are congruent. The line of reflection is called the line of symmetry.

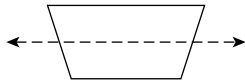
To figure out if a dashed line is a line of symmetry, test to see if the two parts match exactly when folded or reflected across the line.

The two parts match, so the line is a line of symmetry.



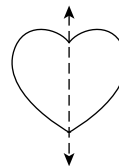
**Decide if each line is a line of symmetry.**

1.



\_\_\_\_\_

2.

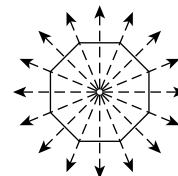
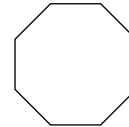


\_\_\_\_\_

To find all of the lines of symmetry of the regular octagon, first trace the polygon and cut it out.

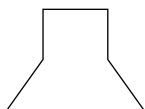
Then fold the polygon in half in different ways to find the lines of symmetry.

A regular octagon has 8 lines of symmetry.



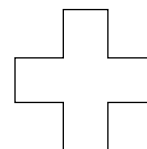
**Find all of the lines of symmetry for each figure. Write how many lines of symmetry each figure has.**

3.



\_\_\_\_\_

4.



\_\_\_\_\_

# **Math Objectives**

**3.04**

Solve problems involving geometric figures in the coordinate plane.

Instructor: \_\_\_\_\_  
Subject: Math Grade 6

Time Frame: **80 minutes**  
Date: \_\_\_\_\_

### **Tessellations**

Essential Question: How can the properties of geometric figures be verified using the coordinate plane?

Objective (s) Numbers: **3.04**

Outcomes: Solve problems involving geometric figures in the coordinate plane.

Materials: Textbook pages 373-378

Anticipatory Set: Today we will learn to identify tessellations and shapes that can tessellate.

### **During the Lesson**

Presentation of Information:

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

Integration of Reading: Reading for information and interpretation.

Integration of Technology: Computer, Projector, PowerPoint, Internet

Modeling: A tessellation is pattern of repeating shapes that completely cover a plane with no gaps and no overlaps.

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

Guided Practice: Practice identifying polygons that can and can not tessellate the plane. Make sure that the students see that regular pentagons and regular octagons **can not** tessellate.

### **After the Lesson**

Independent Practice Text page 374 - 375 {1–3, 7–9, 13, 17–21}  
**AIG:** {3, 7–9, 13–15, 17–21}  
Assign workbook page 7.12

Closure / Assessment: Using 3 different polygons - create a pattern that can tessellate the plane. Enjoy yourself and be colorful!

Reflection:

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

**Related Math6.org Activities:** There are **5** activities connected with this lesson  
\*\*Tessellation Problems

# **Math Objectives**

## **2.01, 3.01, 3.03, 3.04**

Estimate and measure length, perimeter, area, angles, weight, and mass of two- and three-dimensional figures using appropriate tools; Identify and describe the intersection of figures in a plane; Transform figures in the coordinate plane and describe the transformation; Solve problems involving geometric figures in the coordinate plane.

Instructor: \_\_\_\_\_  
Subject: Math Grade 6

Time Frame: **80 minutes**  
Date: \_\_\_\_\_

### Plane Geometry Chapter Review

Essential Question: What steps do you think should be taken to ensure that a person is prepared for examination on a set of skills? (action plan)

Objective (s) Numbers: **2.01, 3.01, 3.03, 3.04**  
Outcomes: Estimate and measure length, perimeter, area, angles, weight, and mass of two- and three-dimensional figures using appropriate tools; Identify and describe the intersection of figures in a plane; Transform figures in the coordinate plane and describe the transformation; Solve problems involving geometric figures in the coordinate plane.

Materials: Textbook pages 144-147; Test Form B  
Anticipatory Set: Today we will review the skills that we have been studying during this unit. We will practice test taking skills and remediate those skills about which we don't feel as comfortable as others.

### During the Lesson

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

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

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

Guided Practice: Discuss Instructions for the review on pages 144-146. Have the students review the Headings and address and questions or requests for immediate remediation.

### After the Lesson

Independent Practice Text page 384-387 {1-20, 1-20}  
**AIG:** {1-20, 1-20}  
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.

Reflection:

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

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

[Vocabulary Matching Practice](#)

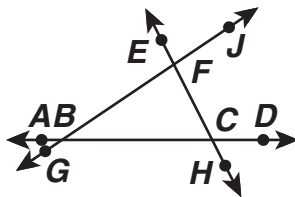
[Practice Test](#)

[Graphing Quiz Bowl](#)

[Graphing Millionaire](#)

**CHAPTER**  
**7** **Form B**

**Chapter Test**



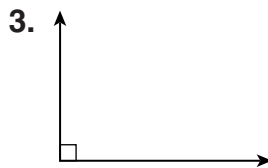
1. Name a point shared by two lines.

\_\_\_\_\_

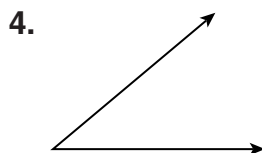
2. Name a plane.

\_\_\_\_\_

Use a protractor to measure each angle. Tell what type of angle it is.

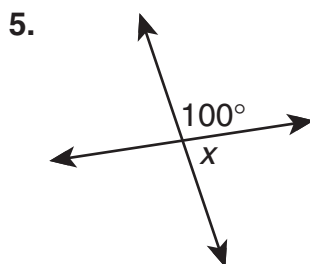


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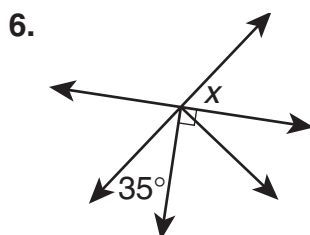


\_\_\_\_\_

Find each unknown angle measure.

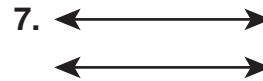


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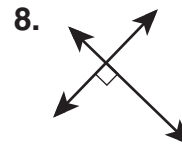


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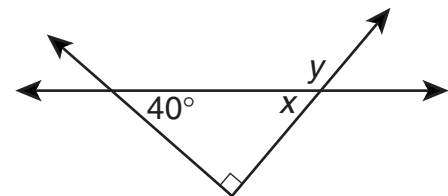
Classify each pair of lines.



\_\_\_\_\_



\_\_\_\_\_



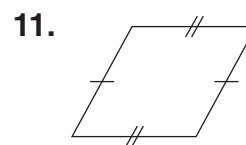
9. What is the measure of  $\angle x$ ?

\_\_\_\_\_

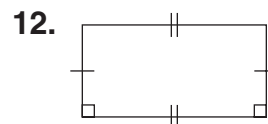
10. Is a figure with angle measures of  $65^\circ$ ,  $45^\circ$ , and  $100^\circ$  a triangle? If so, is it acute, right, or obtuse?

\_\_\_\_\_

Give the most descriptive name.



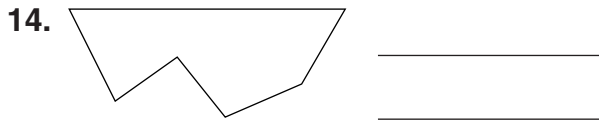
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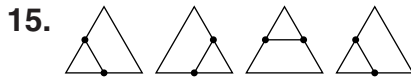
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**CHAPTER**  
**7** **Chapter Test**  
**Form B, continued**

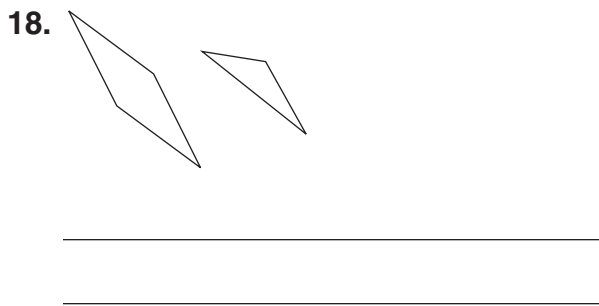
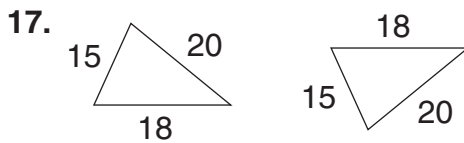
Name each polygon and tell whether it appears to be *regular* or *not regular*.



Draw the next two figures.

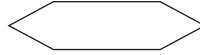


Decide whether the figures in each pair are congruent. If not, explain.

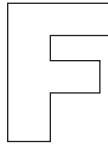


Draw the transformation.

19. 90° clockwise rotation

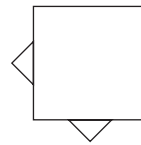


20. Horizontal reflection



Find all the lines of symmetry.

21.

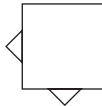


22.



Tell whether the figure can tessellate the plane. If so, make a drawing to show a possible tessellation.

23.



24.





Instructor: \_\_\_\_\_  
Subject: Math Grade 6

Time Frame: **80 minutes**  
Date: \_\_\_\_\_

### Plane Geometry Assessment

Essential Question:	You have now had 6 opportunities to consider the question: "If you could press restart, what would you do differently to prepare for today's exam?" You have been asked to think about it, evaluate your progress and even to discuss your actions impact on your lifestyle. Some of your classmates are still struggling to find the self-discipline needed to implement their plans. As we embark on the higher level skills that will be the difference between a 2 and 3 on the EOG (3 and 4 for better students) what plan can you suggest that will help all of your classmates to achieve mastery and understanding without working to death?
Objective (s) Numbers: Outcomes:	<b>2.01, 3.01, 3.03, 3.04</b> Estimate and measure length, perimeter, area, angles, weight, and mass of two- and three-dimensional figures using appropriate tools; Identify and describe the intersection of figures in a plane; Transform figures in the coordinate plane and describe the transformation; Solve problems involving geometric figures in the coordinate plane.
Materials:	Cumulative Assessment (Form B)
Anticipatory Set:	Today we will assess our mastery of Plane Geometry.

### During the Lesson

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

### After the Lesson

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

**Related Math6.org Activities:** There are **many** activities connected with this lesson  
[Vocabulary Matching Practice](#)  
[Practice Test](#)  
[Decimals Quiz Bowl](#)  
[Decimals Millionaire](#)

# **CHAPTER** **7** **Cumulative Test** **Form B**

Select the best answer.

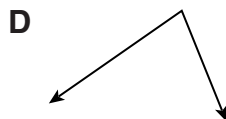
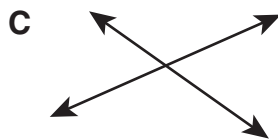
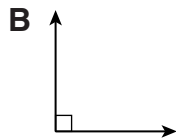
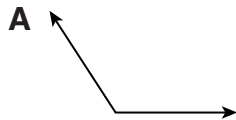
1. If you add 10 to every item in a data set what will happen to the mean?

**A** It is multiplied by 10.  
**B** It is increased by 10.  
**C** It is multiplied by 2.  
**D** The mean does not change.

2. Which measure is the greatest for this set of data? 91, 80, 105, 83, 84, 101, 96, 84

**F** mean                      **H** median  
**G** mode                    **J** range

3. Which of the following is an acute angle?



4. Two angles whose measures have a sum of  $90^\circ$  are what type of angles?

**F** complementary    **H** congruent  
**G** supplementary    **J** vertical

5. In which equation does  $n = 8$ ?

**A**  $n + 25 = 18$       **C**  $7.8 - n = 0.2$   
**B**  $7 = 56n$           **D**  $\frac{7}{8}n = 7$

6. Subtract  $15\frac{7}{8} - 7\frac{3}{16}$ .

**F**  $8\frac{11}{16}$                       **H**  $8\frac{5}{16}$   
**G**  $8\frac{1}{4}$                         **J**  $7\frac{3}{16}$

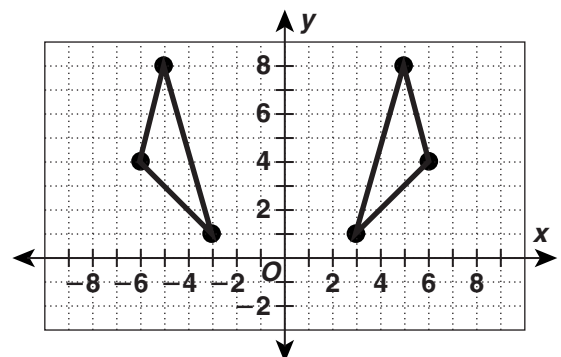
7. For triangle  $ABC$ ,  $\angle B$  measures  $36^\circ$  and  $\angle C$  measures  $25^\circ$ . Find the measure of  $\angle A$  and classify the triangle.

**A**  $\angle A = 119^\circ$ ; acute triangle  
**B**  $\angle A = 119^\circ$ ; obtuse triangle  
**C**  $\angle A = 29^\circ$ ; acute triangle  
**D**  $\angle A = 29^\circ$ ; obtuse triangle

8. What quadrilateral has four right angles and four congruent sides?

**F** rectangle              **H** rhombus  
**G** square                **J** quadrilateral

9. Which transformation is shown?



**A** translation  
**B** reflection  
**C**  $90^\circ$  clockwise rotation  
**D**  $180^\circ$  counterclockwise rotation

**CHAPTER**
**7**
**Cumulative Test**
**Form B, continued**

10. Which shape cannot be used to make a tessellation?

**F** rectangle  
**G** regular pentagon  
**H** regular hexagon  
**J** parallelogram

11. What is the solution to the equation  $0.01c = 13.5$ ?

**A**  $c = 1,350$       **C**  $c = 0.135$   
**B**  $c = 135$       **D**  $c = 0.0135$

12. Simplify  $2\frac{2}{3} + 1\frac{3}{4}$ .

**F**  $3\frac{5}{12}$       **H**  $4\frac{2}{7}$   
**G**  $3\frac{1}{2}$       **J**  $4\frac{5}{12}$

13. What is the decimal for eight and thirty-two thousandths?

**A** 832      **C** 8.032  
**B** 8.32      **D** 8.0032

14. Express  $\frac{53}{6}$  as a mixed number.

**F**  $7\frac{1}{4}$       **H**  $8\frac{7}{11}$   
**G**  $8\frac{5}{6}$       **J** 9

15. What is the GCF for 30 and 50?

**A** 2      **C** 10  
**B** 3      **D** 150

16. The prime factorization of a number is  $2^2 \cdot 3 \cdot 5$ . What is the number?

**F** 10      **H** 30  
**G** 15      **J** 60

17. What set of numbers is 2,400 divisible by?

**A** 2, 3, 5, and 7  
**B** 2, 3, 5, and 6  
**C** 2, 3, 5, 6, and 9  
**D** 2, 3, 5, 6, 9, and 10

18. Choose the best estimate for  $5,235 + 8,608 + 9,215$ .

**F** 24,000      **H** 22,000  
**G** 23,000      **J** 21,000

19. How many times was 36 a data item in the stem-and-leaf plot?

Stem	Leaves
1	1 3 5 4 7 8
2	1 4 5 5 9 9
3	1 2 3 6 6 6 6 7 8

**A** 1      **C** 3  
**B** 2      **D** 4

20. Solve  $9y = 135$ .

**F**  $y = 1,215$       **H**  $y = 15$   
**G**  $y = 126$       **J**  $y = 12$

21. What is the difference in size between a wheel 64.26 cm across and one that is 43.54 cm across?

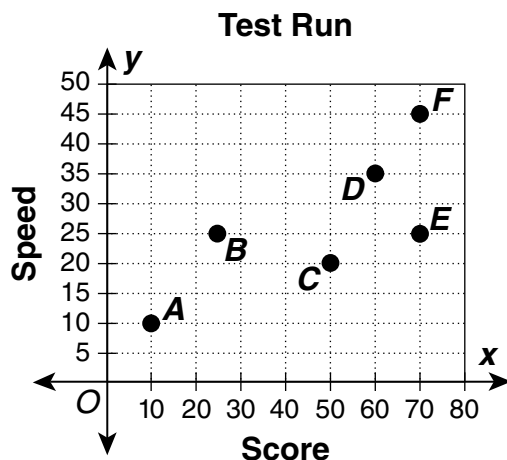
**A** 20.72 cm      **C** 20.32 cm  
**B** 44.32 cm      **D** 107.8 cm

22. Which number represents 4,500,000,000 in scientific notation?

**F**  $4.5 \times 10^8$       **H**  $4.5 \times 10^9$   
**G**  $4.5 \times 10^6$       **J**  $4.5 \times 10^{11}$

**CHAPTER**  
**7**
**Cumulative Test**  
**Form B, continued**

23. What was the speed of model car *D*?



- A** 60                      **C** 25  
**B** 35                      **D** 40

24. Which set of fractions is ordered from least to greatest?

- F**  $\frac{2}{3}, \frac{1}{6}, \frac{2}{9}$                       **H**  $\frac{2}{9}, \frac{1}{3}, \frac{3}{12}$   
**G**  $\frac{2}{9}, \frac{2}{6}, \frac{7}{3}$                       **J**  $\frac{2}{6}, \frac{1}{9}, \frac{2}{3}$

25. What is  $12\frac{4}{5}$  as a decimal?

- A** 12.4                      **C** 12.8  
**B** 12.45                      **D** 64.5

26. Divide  $36.225 \div 1.5$ .

- F** 241.5                      **H** 26.23  
**G** 2.415                      **J** 24.15

27. Simplify  $\frac{7}{8} \div 8$ .

- A** 7                      **C**  $\frac{7}{16}$   
**B**  $\frac{7}{64}$                       **D** 56

28. Solve the equation  $x - \frac{4}{5} = \frac{7}{10}$ .

- F**  $x = \frac{13}{10}$                       **H**  $x = \frac{11}{15}$   
**G**  $x = 3$                       **J**  $x = 1\frac{1}{2}$

29. Which measure is equivalent to 35 meters?

- A** 350 cm                      **C** 0.35 km  
**B** 3.5 km                      **D**  $3.5 \times 10^3$  cm

30. Which is  $8\frac{1}{9}$  written as an improper fraction?

- F**  $\frac{72}{9}$                       **H**  $\frac{9}{8}$   
**G**  $\frac{73}{9}$                       **J**  $\frac{19}{2}$

31. What is the value of  $9^2 \cdot 2 + 4^2 - 7$ ?

- A** 891                      **C** 171  
**B** 92                      **D** 178

32. Which number is the standard form of  $600,000 + 70,000 + 30 + 1$ ?

- F** 6,731                      **H** 67,301  
**G** 670,031                      **J** 607,310

33. Which is a solution to the equation  $w - 258 = 709$ ?

- A**  $w = 967$                       **C**  $w = 256$   
**B**  $w = 451$                       **D**  $w = 2.75$

34. Multiply  $1.78 \cdot 0.8$ .

- F** 1.424                      **H** 2.014  
**G** 14.24                      **J** 20.15

35. What is the word phrase for  $72 \div r$ ?

- A** 72 more than  $r$   
**B** 72 less than  $r$   
**C** the quotient of 72 and  $r$   
**D** the product of 17 and  $r$

# **CHAPTER** **7** **Cumulative Test** **Form B, continued**

36. Find the missing value in the table.

$a$	$8a - 3$
7	53
8	?

- F** 85                      **H** 59  
**G** 61                      **J** 2

37. How many  $\frac{2}{3}$ -cup servings are in an 8-cup container of juice?

- A**  $5\frac{1}{3}$                       **C** 12  
**B** 6                          **D** 16

38. Fernando bought a roll of film with  $x$  pictures. He took 12 of them. Which expression represents the number of pictures left on the roll?

- F**  $x + 12$                       **H**  $x \div 12$   
**G**  $x - 12$                       **J**  $12x$

39. Subtract  $\frac{3}{4} - \frac{3}{5}$ .

- A** 0                          **C**  $\frac{3}{20}$   
**B**  $\frac{1}{5}$                           **D**  $\frac{2}{3}$

40. What fraction does the model show?



- F**  $\frac{6}{7}$                           **H**  $\frac{1}{2}$   
**G**  $\frac{3}{7}$                           **J**  $\frac{2}{3}$

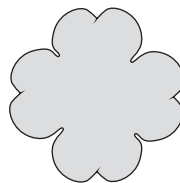
41. What kind of triangle has two sides with length 6 and one side with length 9?

- A** right                      **C** isosceles  
**B** scalene                      **D** equilateral

42. Divide  $16\frac{1}{4} \div 2\frac{1}{2}$ .

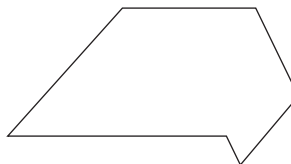
- F**  $8\frac{1}{2}$                           **H**  $6\frac{1}{4}$   
**G**  $8\frac{1}{8}$                           **J**  $6\frac{1}{2}$

43. How many lines of symmetry does the figure have?



- A** 1                          **C** 3  
**B** 2                          **D** 4

44. Identify the figure shown.



- F** irregular pentagon  
**G** regular pentagon  
**H** irregular hexagon  
**J** regular octagon

45. What is the value of  $6^3$ ?

- A** 18                          **C** 216  
**B** 26                          **D** 1,296

Name \_\_\_\_\_

**Plane Geometry Assessment**

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

23	A	B	C	D
24	F	G	H	J
25	A	B	C	D
26	F	G	H	J
27	A	B	C	D
28	F	G	H	J
29	A	B	C	D
30	F	G	H	J
31	A	B	C	D
32	F	G	H	J
33	A	B	C	D
34	F	G	H	J
35	A	B	C	D
36	F	G	H	J
37	A	B	C	D
38	F	G	H	J
39	A	B	C	D
40	F	G	H	J
41	A	B	C	D
42	F	G	H	J
43	A	B	C	D
44	F	G	H	J
45	A	B	C	D

Name \_\_\_\_\_

**Plane Geometry Assessment**

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

23	A	B	C	D
24	F	G	H	J
25	A	B	C	D
26	F	G	H	J
27	A	B	C	D
28	F	G	H	J
29	A	B	C	D
30	F	G	H	J
31	A	B	C	D
32	F	G	H	J
33	A	B	C	D
34	F	G	H	J
35	A	B	C	D
36	F	G	H	J
37	A	B	C	D
38	F	G	H	J
39	A	B	C	D
40	F	G	H	J
41	A	B	C	D
42	F	G	H	J
43	A	B	C	D
44	F	G	H	J
45	A	B	C	D

Plane Geometry Assessment

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

23	A		C	D
24	F		H	J
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26	F	G	H	
27	A		C	D
28	F	G	H	
29	A	B	C	
30	F		H	J
31	A	B		D
32	F		H	J
33		B	C	D
34		G	H	J
35	A	B		D
36	F		H	J
37	A	B		D
38	F		H	J
39	A	B		D
40	F		H	J
41	A	B		D
42	F	G	H	
43	A	B	C	
44	F	G		J
45	A	B		D

Chapter 7 Assessment

9	100%
8	89%
7	78%
6	67%
5	56%
4	44%
3	33%
2	22%
1	11%
0	0%

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