

LESSON
7-1 **Homework and Practice**
Points, Lines, and Planes

Use the diagram to name each geometric figure.

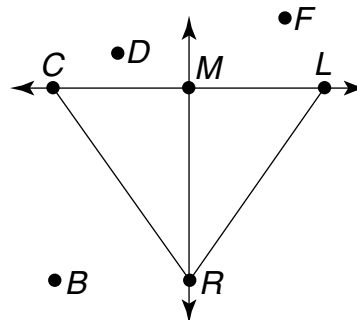
1. two points

2. a plane

3. a line segment

4. a point shared by two lines

5. a line

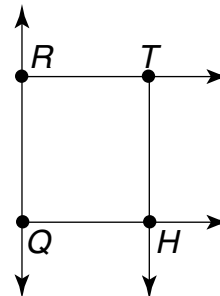


Use the diagram to give a possible name for each figure.

6. two different ways to name the line

7. four different names for rays

8. another name for \overline{RT}



9. Is the following statement always true, sometimes true, or never true? Explain your reasoning. A line segment can be longer than a line.

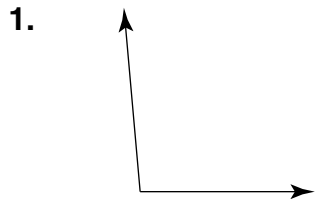
10. Is the following always true, sometimes true, or never true? A line always contains a line segment and a ray.

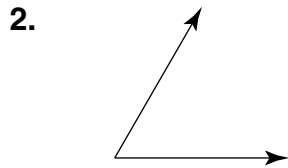
LESSON
7-2

Homework and Practice

Angles

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







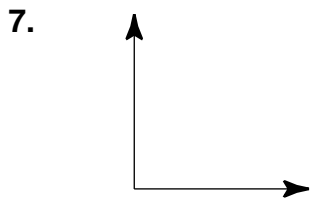
Use a protractor to draw an angle with each given measure.

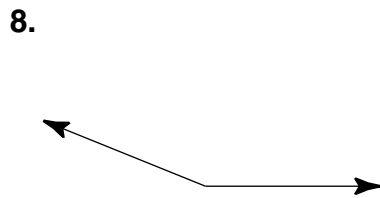
4. 90°

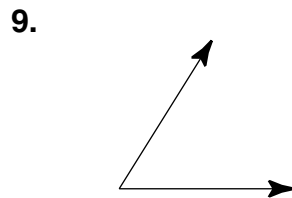
5. 20°

6. 125°

Estimate the measure of each angle, and then use a protractor to check the reasonableness of your estimate.







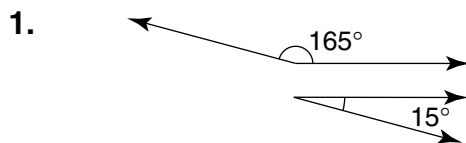
10. The screen of a computer has four angles that make it a quadrilateral shape. Describe each of these angles.

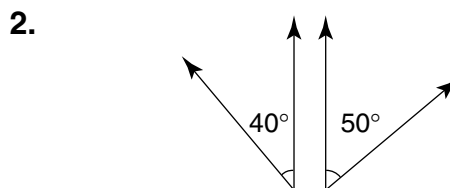
11. What kinds of angles are in each of the letters in this word?

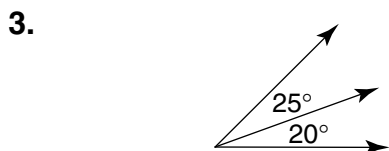
LEFTY

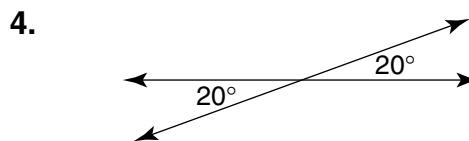
LESSON
7-3 **Homework and Practice**
Angle Relationships

Identify the type of each angle pair shown.



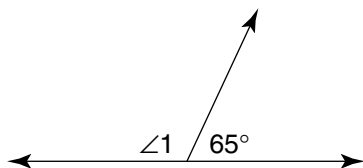




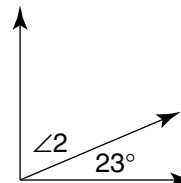


Find each unknown angle measure.

5. The angles are supplementary.



6. The angles are complementary.



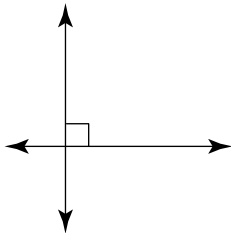
7. Frank says the letter X forms 2 pairs of vertical angles. Juan says it forms 2 pairs of congruent angles. Who is correct? Explain.

8. Is the following statement always true, sometimes true, or never true? Explain your reasoning. Two congruent angles that are supplementary both measure 95° .

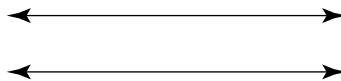
LESSON
7-4 **Homework and Practice**
Classify Lines

Classify each pair of lines.

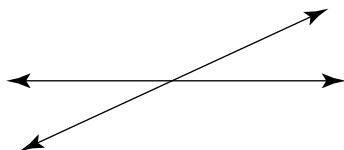
1.



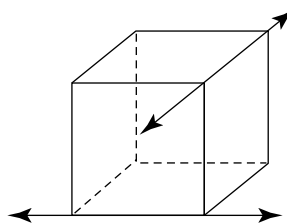
2.



3.



4.



Match each description with its correct classification.

5. \overleftrightarrow{XY} and \overleftrightarrow{MN} lie on different planes and are neither parallel nor intersecting

6. \overleftrightarrow{XY} and \overleftrightarrow{MN} intersect to form right angles.

7. \overleftrightarrow{XY} and \overleftrightarrow{MN} cross each other at one common point.

8. \overleftrightarrow{XY} and \overleftrightarrow{MN} lie on the same plane and never intersect.

9. Look around in your school bag. Name a pair of parallel lines that you see.

A. \overleftrightarrow{XY} and \overleftrightarrow{MN} are skew.

B. \overleftrightarrow{XY} intersects \overleftrightarrow{MN} .

C. $\overleftrightarrow{XY} \parallel \overleftrightarrow{MN}$

D. $\overleftrightarrow{XY} \perp \overleftrightarrow{MN}$

LESSON
7-5 **Homework and Practice**
Triangles

Use the diagram to find the measure of each indicated angle.

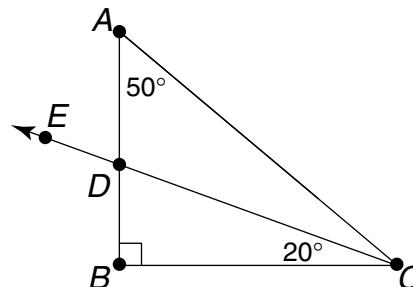
1. $\angle BDC$

2. $\angle BCA$

3. $\angle ADC$

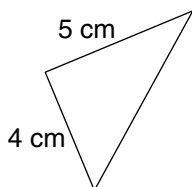
4. $\angle ACD$

5. $\angle EDA$

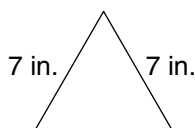


Classify each triangle using the given information.

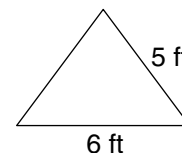
6. The sum of the lengths of the three sides is 15 cm.



7. The sum of the lengths of the three sides is 21 in.



8. The sum of the lengths of the three sides is 16 ft.



9. The angles of the sail of a paper boat measure 90° , 45° , and 45° . Each side measures approximately 2.8 inches, 2 inches, and 2 inches. Classify the triangular shape of the sail in two different ways.

10. One angle in one triangle is congruent to one angle in another triangle. What can you conclude about the other two angles in both triangles?

LESSON
7-6

Homework and Practice

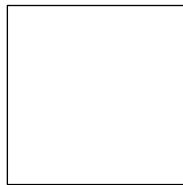
Quadrilaterals

Give the most descriptive name for each figure.

1.



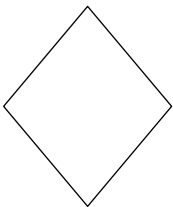
2.



3.



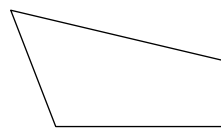
4.



5.



6.



True or False (7-10).

7. All rectangles are also parallelograms.

8. A square is always a rectangle.

9. A quadrilateral is always a rhombus.

10. A quadrilateral is any plane figure with four straight sides and four angles.

11. Barry made a table top in the shape of a quadrilateral. All of its angles measure 90° . It has two different lengths of sides. What is the shape of Barry's table top?

12. The perimeter of a rhombus is 84 inches. What is the length of each side of the rhombus? Explain.

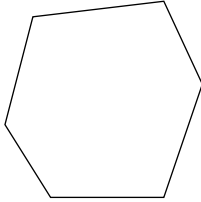
LESSON
7-7

Homework and Practice

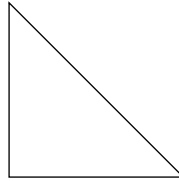
Polygons

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

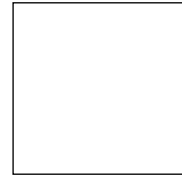
1.



2.



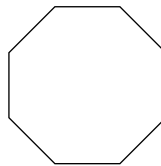
3.



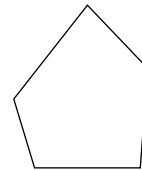
4.



5.



6.

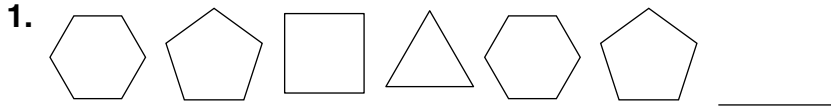


7. Tommy's large trampoline is in the shape of a regular pentagon. Each side of the trampoline measures 7 feet. What is the distance around the entire trampoline?

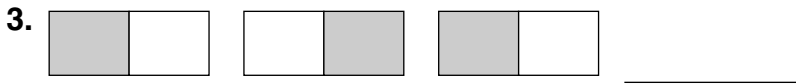
8. Draw a regular pentagon. Now draw one diagonal through that pentagon at any possible two points. Describe the two newly formed polygons.

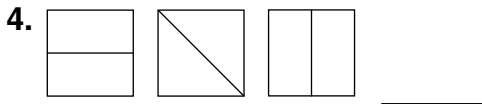
LESSON
7-8 **Homework and Practice**
Geometric Patterns

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



2. R Q R P R Q _ _





5. Books are arranged in a pattern that is made up of 5 rows. The first row has two books. The second has 3 books on it. The third row has 5 books on it, and the fourth row has 8 books on it. How many books will be on the fifth row at the bottom of the stack.

6. Use polygons (more than one type) to create a geometric pattern. Describe your pattern.

LESSON
7-9 **Homework and Practice**
Congruence

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

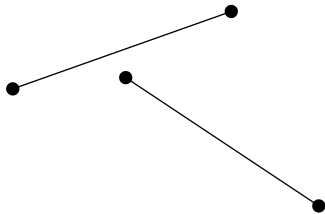
1.



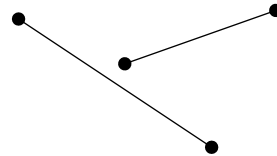
2.



3.



4.

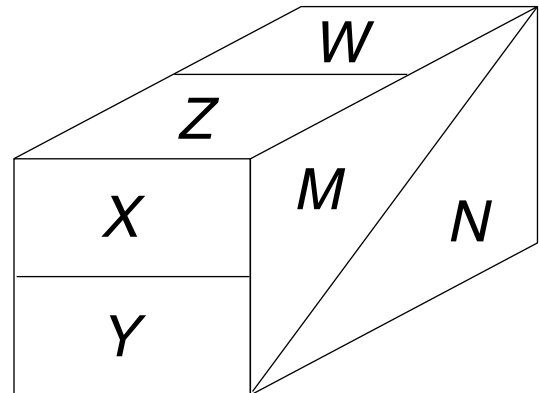


Use the diagram for Exercises 5-7.

5. Which part of the figure is congruent to N ?

6. Which part of the figure is congruent to W ?

7. Which part of the figure is congruent to X ?

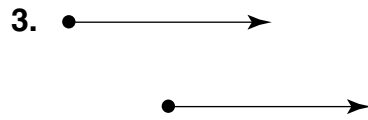


8. Name two parts of a car that appear to be congruent.

9. Hexagon $ABCDEF$ is congruent to hexagon $GHJKLM$. The total length of the sides of hexagon $ABCDEF$ is 36 feet. What is the length of each side of $GHJKLM$?

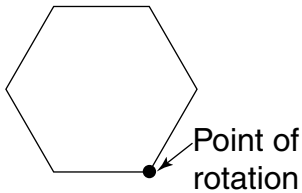
LESSON
7-10 **Homework and Practice**
Transformations

Tell whether each is a *translation*, *rotation*, or *reflection*.

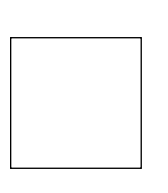


Draw each transformation.

4. Draw a 270° counter-clockwise rotation about the point.



5. Draw a horizontal reflection across the dotted line.



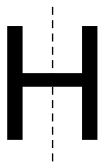
6. How can you get this \rightarrow to look like this \downarrow ?

7. Describe a vertical reflection of the word **HIKE**.

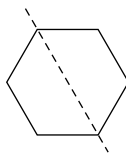
LESSON
7-11 **Homework and Practice**
Symmetry

Determine whether each dashed line appears to be a line of symmetry.

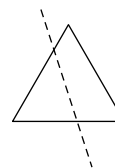
1.



2.

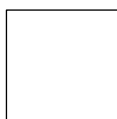


3.

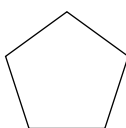


Find all the lines of symmetry in each regular polygon.

4.



5.

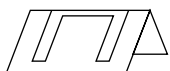


6.

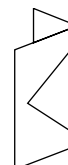


Draw each cut-out figure as it would look unfolded.

7.



8.



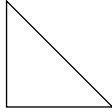
9. Which has more lines of symmetry, a regular pentagon or a square?

10. Of the letters A–L, which have lines of symmetry?

LESSON
7-12 **Homework and Practice**
Tessellations

Identify whether each polygon can tessellate the plane. Make a drawing to show your answer.

1.

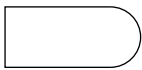


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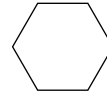


Identify whether each shape can tessellate the plane. Make a drawing to show your answer.

3.



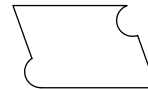
4.



5.



6.



7. Mark says that a triangle is easier than a square to tessellate. Do you agree? Explain

8. If you take an irregular polygon and cut a square out of the top and place it on to an adjacent side, will it always tessellate? Explain.
