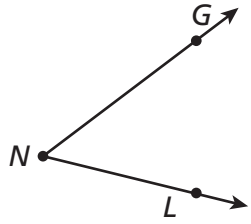
8-1 Homework

Name _____ Date _____

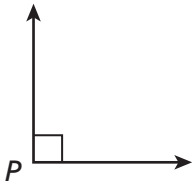
Draw each geometric figure.

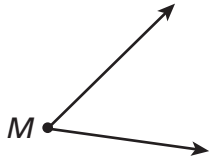
1. a point
2. a ray
3. an angle

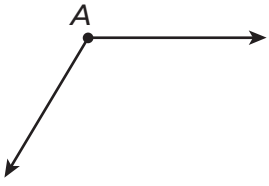
4. Name the angle shown. _____

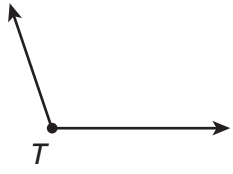


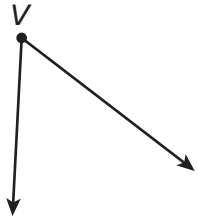
Look at the angles below.

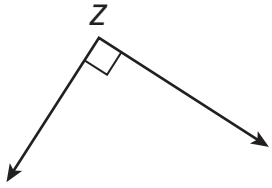












5. Which angles are right angles? _____
6. Which angles are acute angles? _____
7. Which angles are obtuse angles? _____

8-1 Remembering

Name _____ Date _____

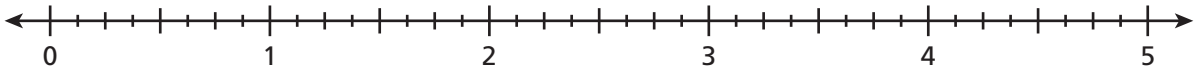
Add or subtract.

1. $5\frac{4}{5} + 3\frac{1}{5}$
2. $12\frac{5}{8} - 4\frac{3}{8}$
3. $3\frac{5}{7} + 9\frac{3}{7}$
4. $6\frac{2}{9} - 2\frac{5}{9}$

Write $<$ or $>$ to make each statement true.

5. $\frac{3}{4} \bigcirc \frac{1}{4}$
6. $\frac{5}{6} \bigcirc \frac{5}{4}$
7. $\frac{7}{10} \bigcirc \frac{7}{12}$
8. $\frac{6}{8} \bigcirc \frac{4}{8}$
9. $\frac{4}{8} \bigcirc \frac{4}{12}$
10. $\frac{17}{25} \bigcirc \frac{21}{25}$

11. **Mark and label the point for each fraction or mixed number with its letter.**



a. $2\frac{1}{2}$ **b.** $3\frac{5}{8}$ **c.** $\frac{1}{4}$ **d.** $1\frac{4}{8}$ **e.** $3\frac{1}{8}$

f. $2\frac{3}{4}$ **g.** $3\frac{1}{2}$ **h.** $1\frac{7}{8}$ **i.** $\frac{6}{8}$ **j.** $4\frac{3}{8}$

12. **Stretch Your Thinking** Two spiders sit on the upper left corner of a square window frame. One spider starts walking right along the top of the window frame. The other spider starts walking down along the left side of the window frame. Name each of the following using geometry terms.

a.) the place where the spiders began _____

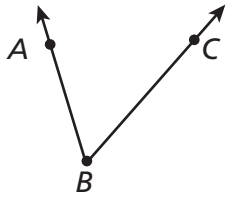
b.) the walking path of each spider _____

c.) the type of angle formed by their paths _____

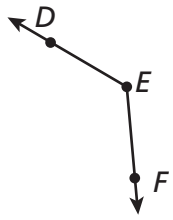
8-2 Homework

Name _____ Date _____

Use a protractor to find the measure of each angle.

1. 

_____

2. 

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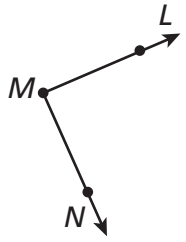
3. 

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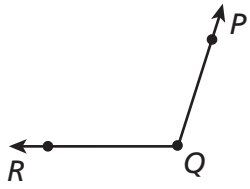
4. 

_____

Draw each angle.

5. an angle with measure 75°

6. an angle with measure 150°

7. On a protractor there are two scales. Read one scale to find 44°. What is the measure on the other scale?

_____

8. Which would be greater, the measure of a right angle or the measure of an obtuse angle?

_____

8-2 Remembering

Name _____ Date _____

Solve. *Show your work.*

1. Presley ordered a small popcorn and Ella ordered a medium popcorn. They both ate $\frac{3}{4}$ of their popcorn. Who ate more popcorn? Explain.

_____

_____

2. It takes both Jack and Scott 12 minutes to walk to school. Jack had his headphones on for $\frac{2}{3}$ of the walk and Scott had his on for $\frac{2}{5}$ of the walk. Who had their headphones on longer? Explain.

_____

_____

_____

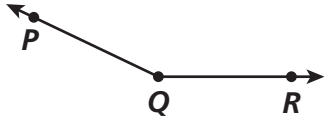
Draw each geometric figure.

3. a line segment

4. a line

5. an angle

6. Name the angle shown.



_____

7. **Stretch Your Thinking** You can think of the two hands of a clock as rays of an angle. What type of angle do you see between the clock hands when the clock shows the following times? Draw a sketch, if you need to.

a.) 3:05 _____

b.) 6:00 _____

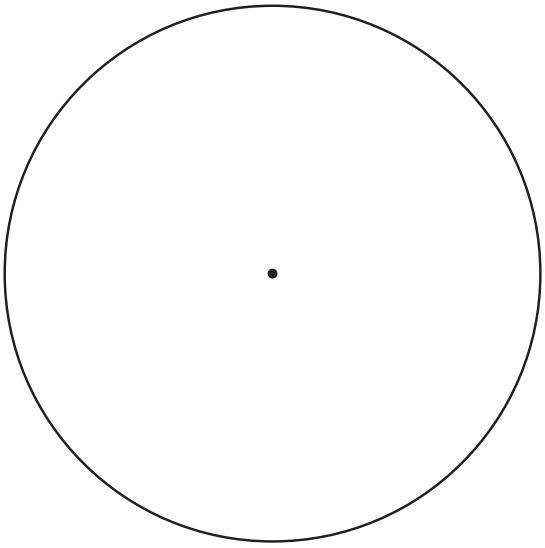
c.) 9:10 _____

8-3 Homework

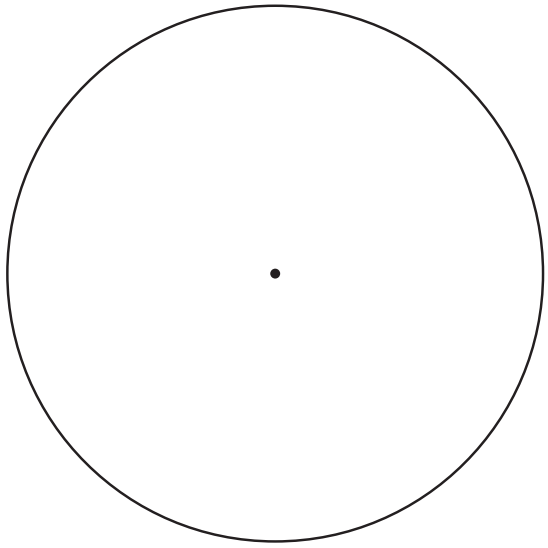
Name _____ Date _____

Use a straightedge and a protractor to draw and shade an angle of each type. Measure and label each angle.

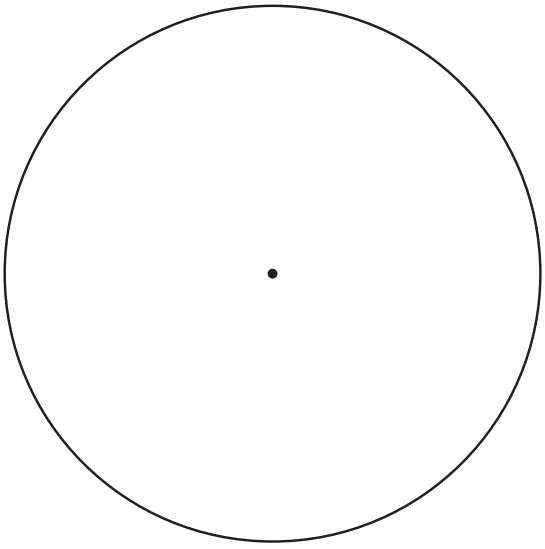
1. acute angle less than 40°



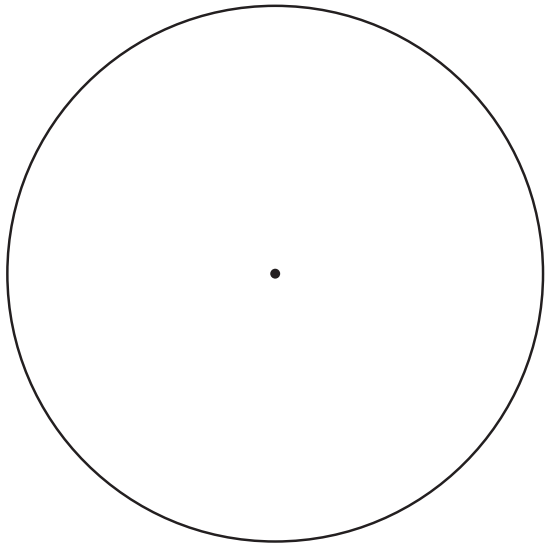
2. acute angle greater than 40°



3. obtuse angle less than 160°



4. four angles with a sum of 360°



5. Write out the sum of your angle measures in Exercise 4 to show that the sum equals 360°.

_____

8-3 Remembering

Name _____ Date _____

Complete.

1. $\frac{4}{7} = \frac{4 \times \square}{7 \times \square} = \frac{12}{\square}$

2. $\frac{5}{8} = \frac{5 \times \square}{8 \times \square} = \frac{\square}{40}$

3. $\frac{8}{9} = \frac{8 \times \square}{9 \times \square} = \frac{32}{\square}$

4. $\frac{1}{4} = \frac{1 \times \square}{4 \times \square} = \frac{12}{\square}$

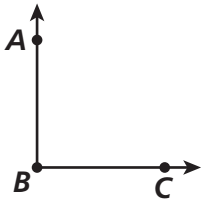
5. $\frac{3}{10} = \frac{3 \times \square}{10 \times \square} = \frac{\square}{70}$

6. $\frac{2}{11} = \frac{2 \times \square}{11 \times \square} = \frac{12}{\square}$

Use a protractor to find the measure of each angle.

7. 

_____

8. 

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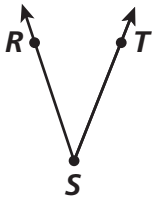
9. 

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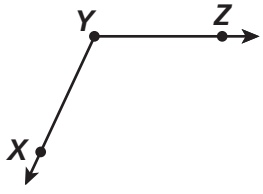
10. 

_____

11. **Stretch Your Thinking** Draw an angle with a measure of 0°. Describe your drawing.

_____

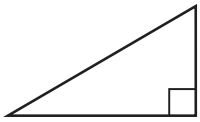
_____

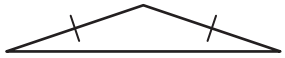
_____

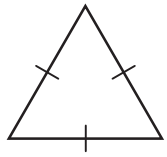
8-4 Homework

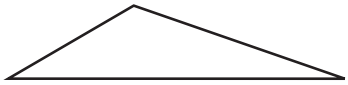
Name _____ Date _____

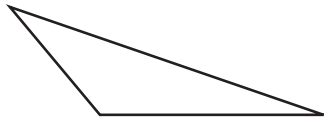
Name each triangle by its angles and then by its sides.

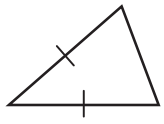
1. 

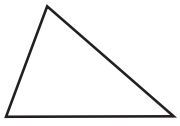
2. 

3. 

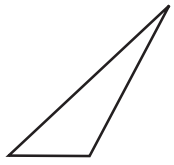
4. 

5. 

6. 

7. 

8. 

9. 

10. Describe how acute, obtuse, and right triangles are different.

11. Describe how scalene, isosceles, and equilateral triangles are different.

8-4 Remembering

Name _____ Date _____

Simplify each fraction.

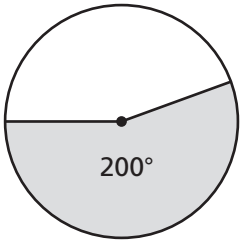
1. $\frac{9 \div \square}{12 \div \square} =$

2. $\frac{18 \div \square}{30 \div \square} =$

3. $\frac{25 \div \square}{75 \div \square} =$

4. $\frac{32 \div \square}{72 \div \square} =$

The measure of each shaded angle is given.
Write the measure of each angle that is not shaded.

5. 

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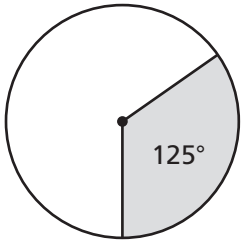
6. 

_____

7. **Stretch Your Thinking** Aileen is trying to correctly classify a triangle by its angles. Her only information is that the triangle has at least one acute angle. Aileen says this must be an acute triangle. Is she right? Explain.

_____

_____

_____

_____

_____

_____

_____

_____

8-5 Homework

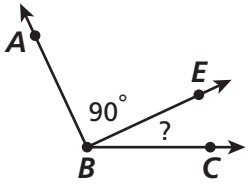
Name _____ Date _____

Use a protractor to draw the two described angles next to each other. What is the measure of the larger angle they form when they are put together?

1. The measures of the two angles are 20° and 55°.

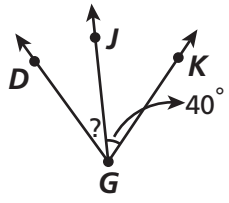
2. The measures of the two angles are 65° and 95°.

Write and solve an equation to find the unknown angle measure.

3. 

The measure of $\angle ABC$ is 115°.

What is the measure of $\angle EBC$?

4. 

The measure of $\angle DGK$ is 70°.

What is the measure of $\angle DGJ$?

5. When two 45° angles are put together, what kind of angle will they form?

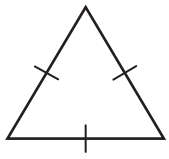
8-5 Remembering

Name _____ Date _____

Use a common denominator to compare the fractions. Write $>$, $<$, or $=$ to make a true statement.

1. $\frac{5}{8} \bigcirc \frac{1}{2}$
2. $\frac{4}{6} \bigcirc \frac{6}{9}$
3. $\frac{7}{12} \bigcirc \frac{2}{3}$
4. $\frac{3}{10} \bigcirc \frac{2}{7}$
5. $\frac{3}{4} \bigcirc \frac{5}{6}$
6. $\frac{7}{12} \bigcirc \frac{19}{24}$

Name each triangle by its angles and then by its sides.

7. 

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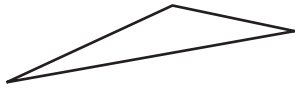
8. 

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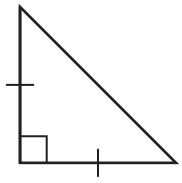
9. 

_____

_____

10. **Stretch Your Thinking** Four angles are put together, forming a straight angle. Two of the angles are the same size. The other two angles are also the same size but different from the other two. If one of the four angles measures 40°, what are the measures of the other three angles? Explain.

_____

_____

_____

_____

_____

_____

_____

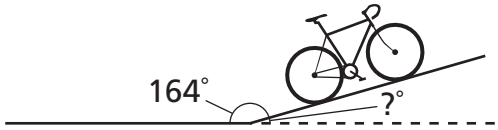
_____

8-6 Homework

Name _____ Date _____

Write an equation to solve each problem.

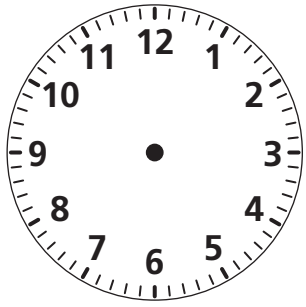
1. Suppose you are bicycling along a straight road that suddenly starts sloping up a hill. You want to know what the angle measure of the slope is, but you can't measure inside the hill.



If you are able to measure the angle on top of the road, however, you can use an equation to find the unknown measure. What is the angle of the slope of the hill shown?

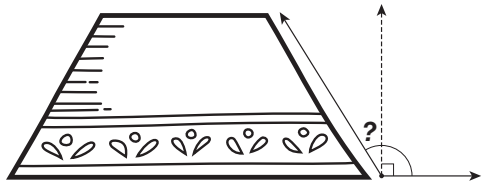
_____

2. On the clock face shown at the right, draw clock hands to show the times 3:00 and 5:00. One clock hand for each time will overlap with a clock hand from the other time. What is the difference between the measures of the angles formed by the hands of the clocks for the two times? (Hint: There are 30° between each pair of numbers on a clock.)



_____

3. A lampshade is often sloped, with the top narrower than the bottom. For the lampshade shown, the whole angle shown is 122°. Find the measure of the unknown angle to find by how much the lampshade is sloped from upright.

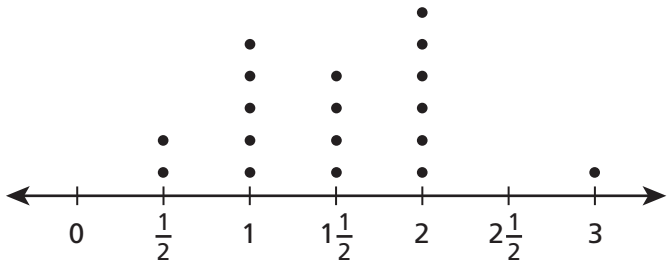


_____

8-6 Remembering

Name _____ Date _____

The line plot shows the amount of cream put in a cup by each of a restaurant's lunch customers who ordered hot tea. Use the line plot for Problems 1–3.



Cream in Tea (in Tablespoons)

1. How many customers ordered hot tea?

_____

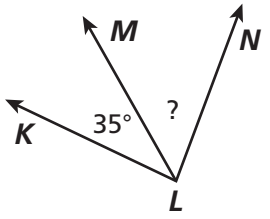
2. How many customers used more than 1 tablespoon of cream?

_____

3. What is the difference between the greatest and least amount of cream the customers used?

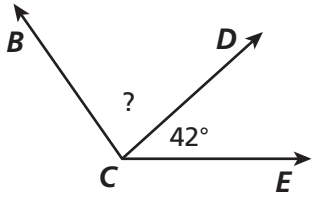
_____

Use an equation to find the unknown angle measure.

4. 

The measure of $\angle KLN$ is 85°.

_____

5. 

The measure of $\angle BCE$ is 125°.

_____

6. **Stretch Your Thinking** Hannah says that when the hands on a clock show 9:30, the angle is 90°. Jennie says the angle is obtuse. Who is correct? Explain. Make a drawing to show which girl is correct.

_____

_____

_____

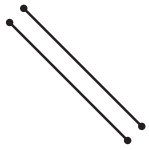
_____

_____

8-7 Homework

Name _____ Date _____

Which of the line segments below look parallel? Which look perpendicular? Which look neither parallel nor perpendicular? Explain your thinking.

1. 

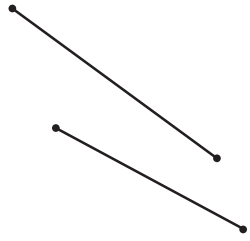
Parallel: _____ Perpendicular: _____

_____

2. 

Parallel: _____ Perpendicular: _____

_____

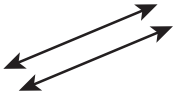
3. 

Parallel: _____ Perpendicular: _____

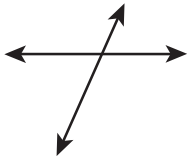
_____

_____

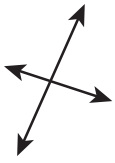
Tell whether each pair of lines is *parallel*, *perpendicular*, or *neither*.

4. 

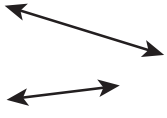
_____

5. 

_____

6. 

_____

7. 

_____

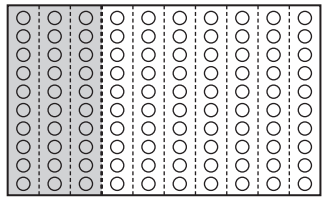
8. First draw a line segment 5 centimeters long. Then draw a line segment 7 centimeters long parallel to your first line segment.

8-7 Remembering

Name _____ Date _____

Use the visual to fill in each blank.

1. The shaded part of the whole represents:

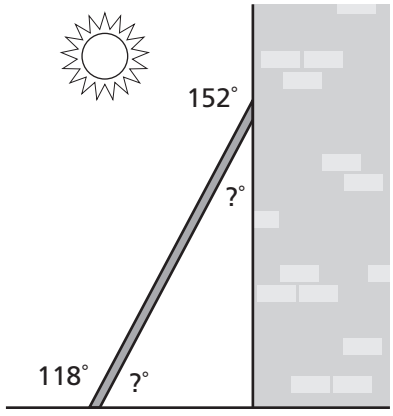


$\frac{30}{100}$ represents _____ of _____ equal parts and the decimal _____.

$\frac{3}{10}$ represents _____ of _____ equal parts and the decimal _____.

Write an equation to solve each problem.

2. A ladder leans up against a wall, as shown in the diagram. What angle measure does the ladder form with the wall?



_____

3. What angle measure does the ladder form with the ground?

_____

4. **Stretch Your Thinking** Look around the room. Describe 3 pairs of parallel line segments you see. Describe 3 pairs of perpendicular line segments.

_____

_____

_____

_____

_____

_____

_____

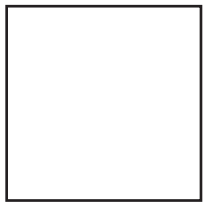
_____

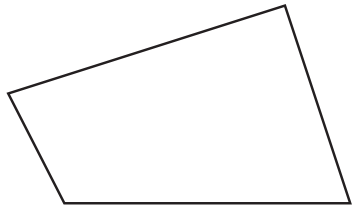
8-8 Homework

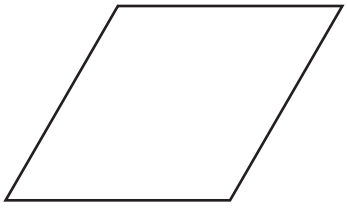
Name _____ Date _____

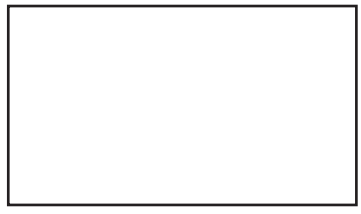
VOCABULARY
quadrilateral
square
trapezoid
rhombus
rectangle
parallelogram

Using the Vocabulary box at the right, write the name of the quadrilateral that best describes each figure. Use each word once. Describe how it is different from other quadrilaterals.

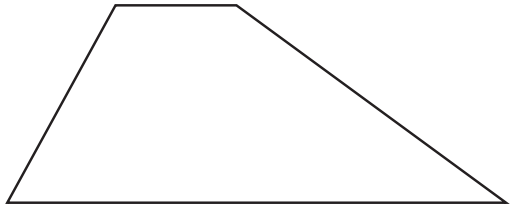
1. 

2. 

3. 

4. 

5. 

6. 

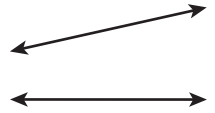
8-8 Remembering

Name _____ Date _____

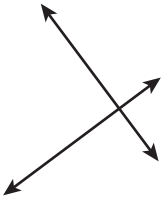
Write these amounts as decimal numbers.

1. 3 tenths _____
2. 7 hundredths _____
3. 56 hundredths _____
4. $\frac{6}{100}$ _____
5. $\frac{42}{100}$ _____
6. $\frac{9}{10}$ _____

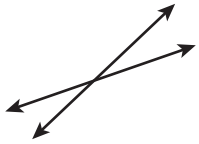
Tell whether each pair of lines is *parallel*, *perpendicular*, or *neither*.

7. 

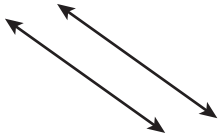
_____

8. 

_____

9. 

_____

10. 

_____

11. First draw a line segment 4 centimeters long. Then draw a line segment 3 centimeters long that is not parallel nor perpendicular to the first line.

12. **Stretch Your Thinking** Bianca has a certain shape in mind. She says it has all the following names: quadrilateral, parallelogram, and rectangle. Make a drawing that could be Bianca's shape. Explain why it has each of these names.

_____

_____

_____

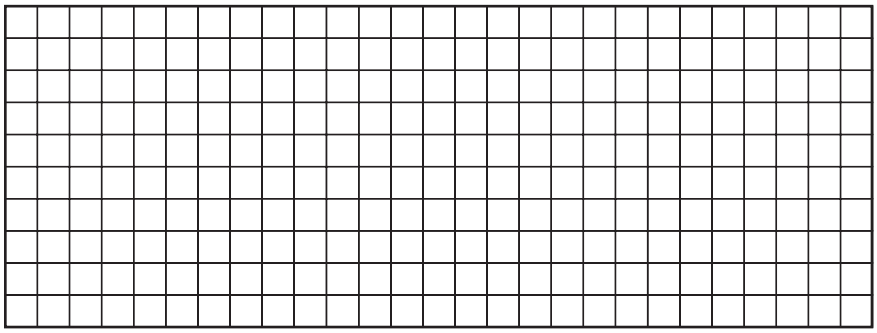
_____

_____

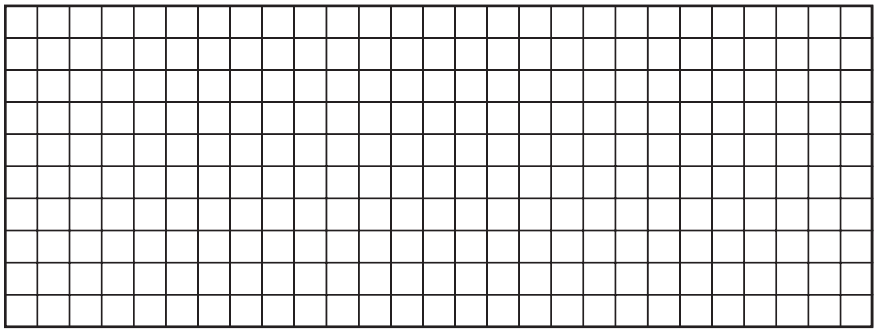
8-9 Homework

Name _____ Date _____

1. Draw a rectangle and a parallelogram. Draw one diagonal on each figure. Name the kinds of triangles you made.



2. Draw your figures again. Draw the other diagonal and name the kinds of triangles you made this time.



3. Use geometry words to describe how diagonals of quadrilaterals make triangles.

4. Use geometry words to describe a way to separate triangles into other triangles.

8-9 Remembering

Name _____ Date _____

Write the decimal numbers that come next.

1. 0.01 0.02 0.03 _____ _____ _____ _____
2. 0.3 0.4 0.5 _____ _____ _____ _____
3. 0.46 0.47 0.48 _____ _____ _____ _____

Using the Vocabulary box at the right, write the name of the quadrilateral that best describes each figure. Use each word once. Describe how it is different from other quadrilaterals.

VOCABULARY
trapezoid
rectangle

4. 

_____
_____
_____

5. 

_____
_____
_____

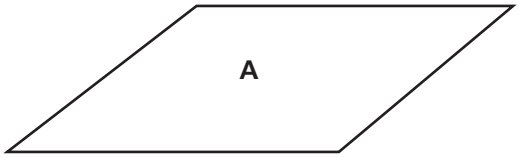
6. **Stretch Your Thinking** Suppose you drew a diagonal in each of the following quadrilaterals: rectangle, trapezoid, parallelogram. In which figures do triangles with the same size and shape form? In which figures do triangles with a different size and shape form? Explain.

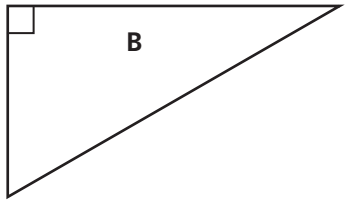
_____
_____
_____
_____
_____
_____

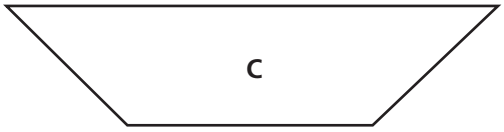
8-10 Homework

Name _____ Date _____

1. What are some different ways you could sort these three figures? Which figures would be in the group for each sorting rule?







_____

_____

_____

_____

2. Draw a fourth figure to add to the figures in Exercise 1. Does it match any of the sorting rules you listed for Exercise 1?

_____

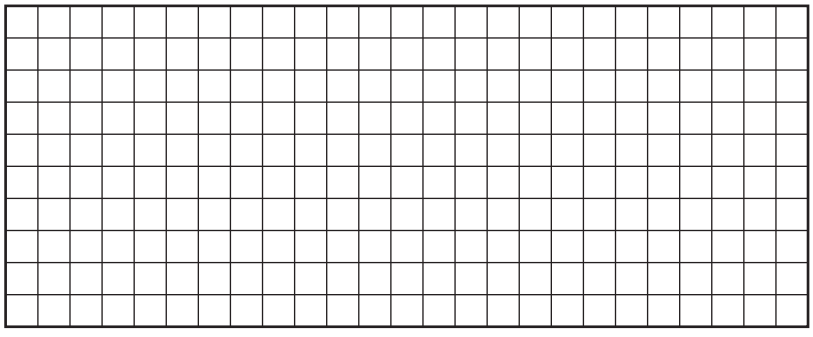
8-10 Remembering

Name _____ Date _____

Write each amount in decimal form.

1. 8 tenths _____
2. 62 hundredths _____
3. 8 hundredths _____
4. $3\frac{4}{10}$ _____
5. $5\frac{37}{100}$ _____
6. $73\frac{1}{100}$ _____
7. 12 and 3 tenths _____
8. 9 and 82 hundredths _____
9. 45 and 6 hundredths _____

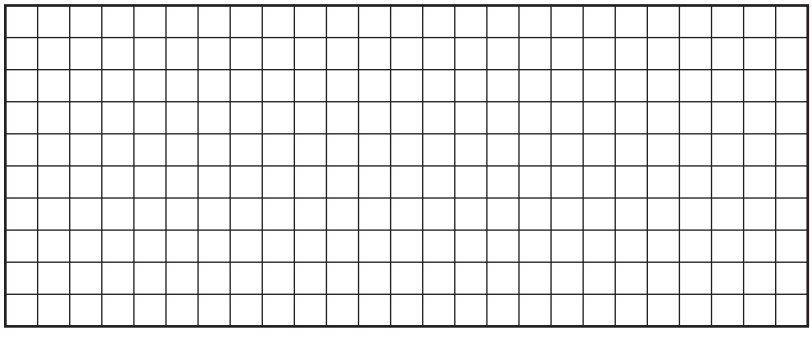
10. Draw a square and a rhombus. Draw one diagonal on each figure. Name the kinds of triangles you made.



_____

_____

11. Draw your figures again. Draw the other diagonal and name the kinds of triangles you made this time.



_____

_____

12. **Stretch Your Thinking** Draw and name three polygons that each have at least one right angle. Label each right angle on the polygons.

_____

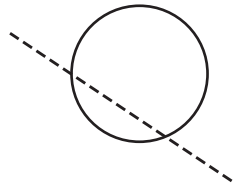
_____

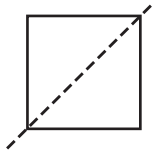
_____

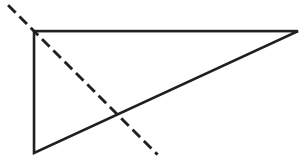
8-11 Homework

Name _____ Date _____

Tell whether the dotted line is a line of symmetry.

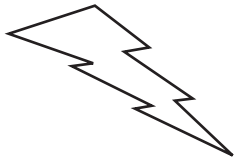
1. 

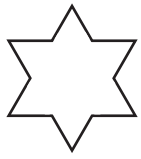
2. 

3. 

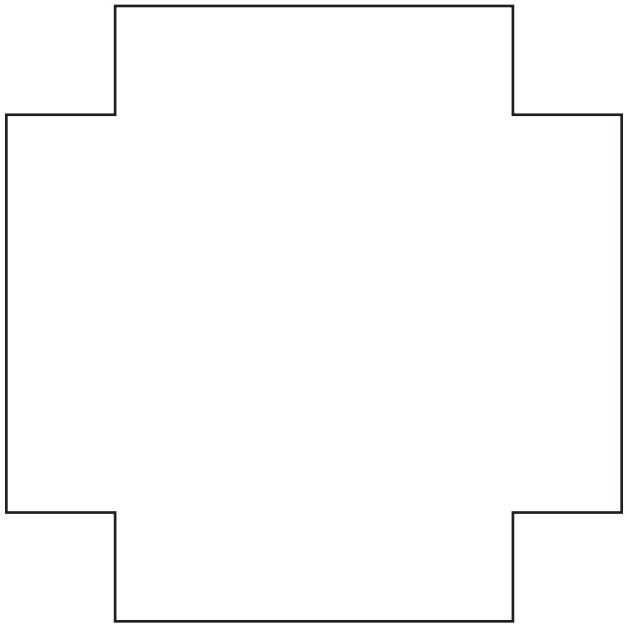
How many lines of symmetry does each figure have?

4. 

5. 

6. 

7. Draw any lines of symmetry for this figure.



8-11 Remembering

Name _____ Date _____

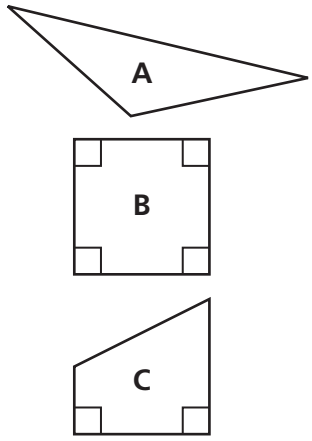
Add or subtract.

1. 12,493 + 6,551

2. 536,784 − 69,205

3. 900,040 − 318,276

4. What are some different ways you could sort these three figures? Which figures would be in the group for each sorting rule?



_____

_____

_____

_____

5. Draw a fourth figure to add to the figures in Exercise 4. Does it match any of the sorting rules you listed for Exercise 4?

6. **Stretch Your Thinking** Consider only the shape and not the design of the following real life objects: square dinner plate, stop sign, American flag, letter P, letter M, tennis racket. Which of these objects have line symmetry? Which of these objects have more than one line of symmetry? Write the first letter of your first name. Does it have line symmetry?

_____

_____

_____

_____

8-12 Homework

Name _____ Date _____

Draw a flag design. The design must include a quadrilateral with 2 lines of symmetry. The flag must also have a triangle with a 45° angle.

1. What type of quadrilateral did you draw? How did you make sure that the quadrilateral has 2 lines of symmetry?

_____

_____

2. What type of triangle did you draw in the flag design? What tool did you use to make sure that the angle you drew measures 45°?

_____

_____

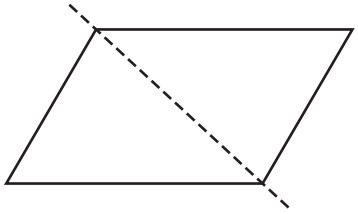
8-12 Remembering

Name _____ Date _____

Insert $<$ or $>$ to make a true statement.

1. 7.24 ◯ 72.4
2. 8.07 ◯ 8.7
3. 5.32 ◯ 3.52
4. 20.8 ◯ 2.08
5. 12.3 ◯ 3.12
6. 2.9 ◯ 29
7. 23.15 ◯ 24.1
8. 90.2 ◯ 9.02

Tell whether the dotted line is a line of symmetry.

9. 

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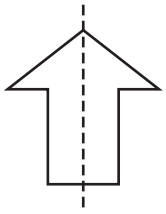
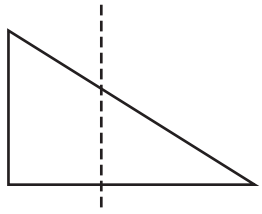
10. 

_____

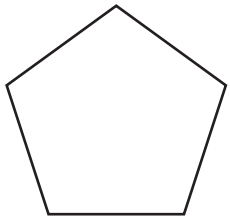
11. 

_____

How many lines of symmetry does each figure have?

12. 

_____

13. 

_____

14. 

_____

15. **Stretch Your Thinking** Design a pennant for your school in the shape of an acute isosceles triangle. Within the design, include a quadrilateral with four right angles and at least one set of parallel lines.

_____