

Problem of the Day

Can two acute angles be supplementary? Explain your answer.

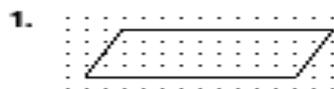
No; the measure of each angle must be less than 90° , so the sum of their measures must be less than 180° . To be supplementary, the sum must equal 180° .

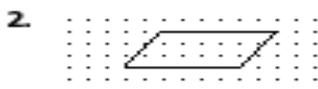


Practice 8-6

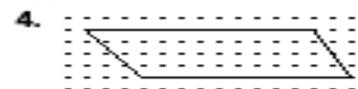
Congruent and Similar Figures

For each figure tell whether it is congruent to the parallelogram at the right.

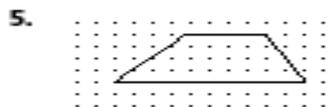


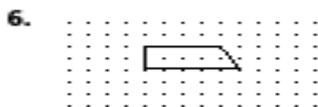


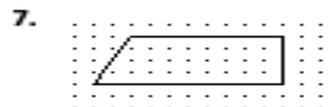


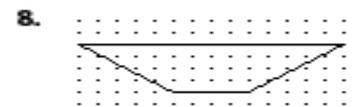


Which trapezoids appear to be similar to the trapezoid at the right?

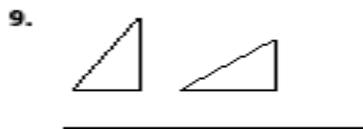


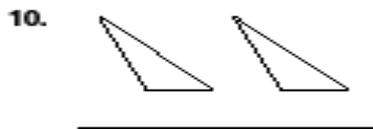


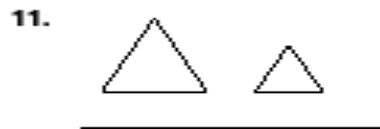




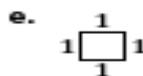
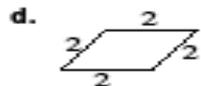
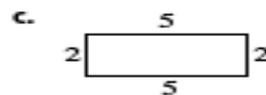
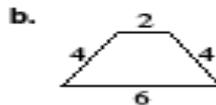
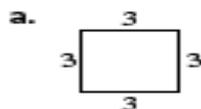
Tell whether the triangles appear to be *congruent*, *similar*, or *neither*.



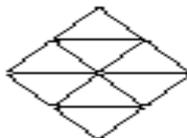




12. List the pairs of figures that are similar. If necessary, use a protractor to measure the angles.



13. The figure below contains eight congruent triangles. Redraw the figure with four fewer segments, so that only four congruent triangles remain.

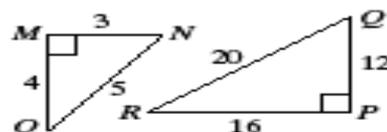


8-6 • Guided Problem Solving

GPS Student Page 395, Exercise 17a:

Triangles MNO and PQR at the right are similar.

- a. List the pairs of congruent angles.



Understand

1. What does it mean to be *congruent*?

2. How do you know if the angles in triangles MNO and PQR are right angles?

Plan and Carry Out

3. Name the right angle in each triangle.

4. Name the angle opposite the shortest side in each triangle.

5. Name the angle opposite the second-longest side in each triangle.

Check

6. How do you know if you paired the correct angles together?

Solve Another Problem

7. List the pairs of corresponding sides in the figure above.

What You Learned

In Lesson 8-6 You learned to identify congruent and similar figures.



Materials:

pg 398-401

Pg 126-127 Daily Notetaking Guide

Standards:

4.2.6 A.3 Identify similar figures.



What You'll Learn

In Lesson 8-7 you will learn to find lines of symmetry.

Why Learn This?

You often see symmetry in nature, as in the butterfly at the right. You can also find symmetrical designs in fabrics, flags, architecture, and art.



Vocabulary

Vocabulary

Under Geometry

Line Symmetry – A figure has line symmetry if a line can divide the figure so each half is a mirror image of the other.

Line of Symmetry – the line that divides a figure in half creating a mirror image.



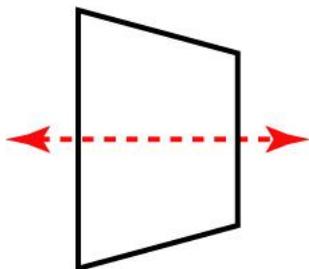
Additional Examples

1 EXAMPLE

Is the dashed line shown in each figure a line of symmetry? Explain.

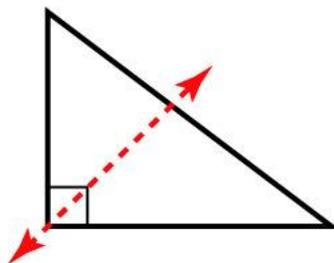


a.



Yes, if you fold the figure along the line, the two parts match.

b.



No, if you fold the figure along the line, the two parts do not match.

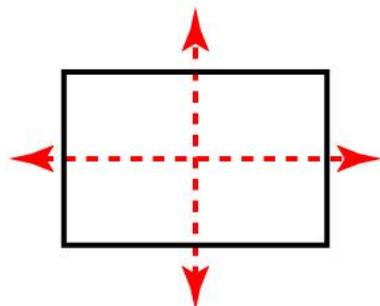


Additional Examples

2 EXAMPLE How many lines of symmetry does each figure have?

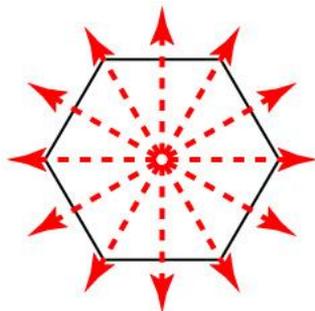
Trace the figure and draw the lines of symmetry.

a.



The rectangle has two lines of symmetry.

b.



The hexagon has six lines of symmetry.

 **Quick Check**



Closure

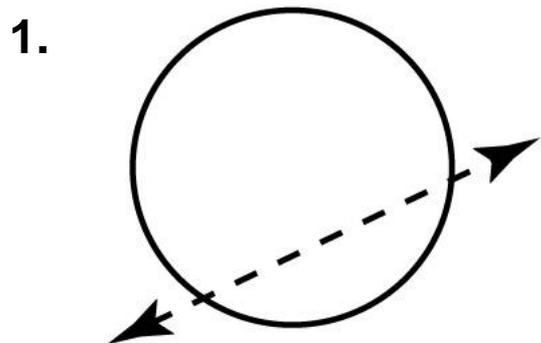
When does a figure have a line of symmetry?

When a line can be drawn through the figure so that each half is a mirror image of the other.

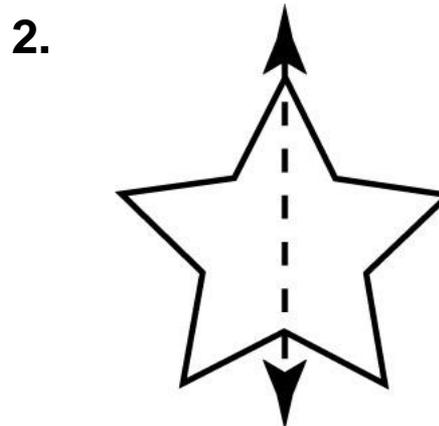


Lesson Quiz

Is the dashed line shown in each figure a line of symmetry?



no



yes

3. How many lines of symmetry does an equilateral triangle have?

3



Work

Class work

pg 400 – 401 1 - 23

Homework

pg 371 Practice 8-7

pg 372 Guided Problem Solving 8-7

