2.1 Exercises

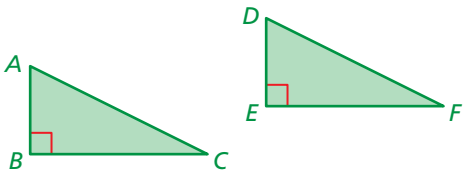
Check It Out
Help with Homework
BigIdeasMath.com

Vocabulary and Concept Check

1. **VOCABULARY** $\triangle ABC$ is congruent to $\triangle DEF$.

   a. Identify the corresponding angles.

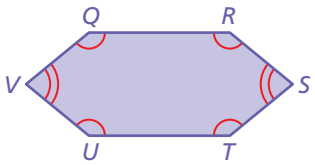
   b. Identify the corresponding sides.



2. **VOCABULARY** Explain how you can tell that two figures are congruent.

3. **WHICH ONE DOESN'T BELONG?** Which one does *not* belong with the other three? Explain your reasoning.

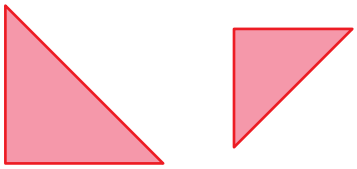
$\angle R$ $\angle U$ $\angle V$ $\angle Q$



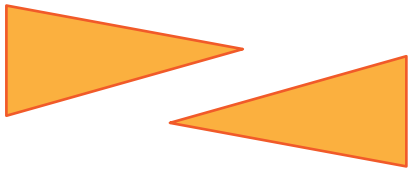
Practice and Problem Solving

Tell whether the triangles are *congruent* or *not congruent*.

4.

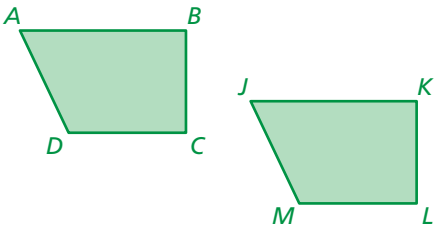


5.

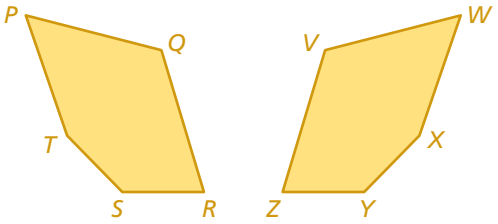


The figures are congruent. Name the corresponding angles and the corresponding sides.

1 6.

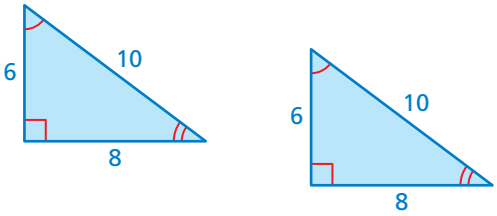


7.

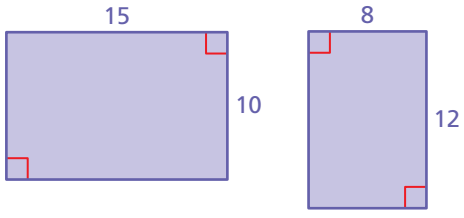


Tell whether the two figures are congruent. Explain your reasoning.

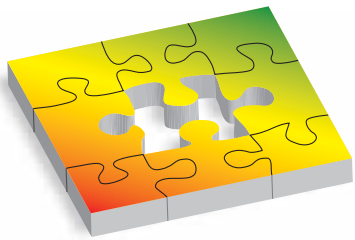
2 8.



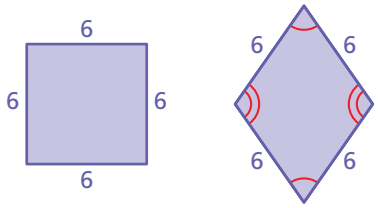
9.



10. **PUZZLE** Describe the relationship between the unfinished puzzle and the missing piece.

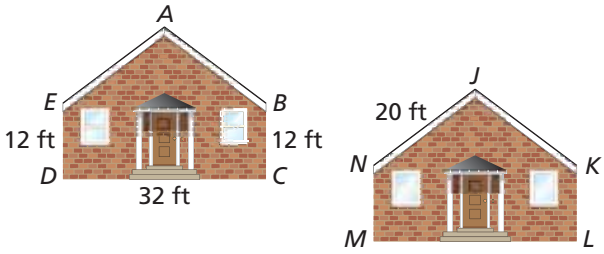


11. ERROR ANALYSIS Describe and correct the error in telling whether the two figures are congruent.



> Both figures have four sides, and the corresponding side lengths are equal. So, they are congruent.

3 12. HOUSES The fronts of the houses are identical.



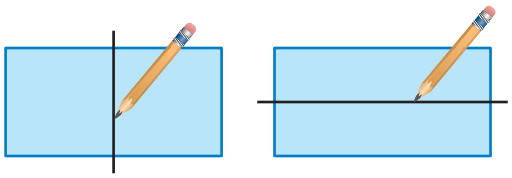
a. What is the length of side LM?

b. Which angle of $JKLMN$ corresponds to $\angle D$?

c. Side AB is congruent to side AE. What is the length of side AB?

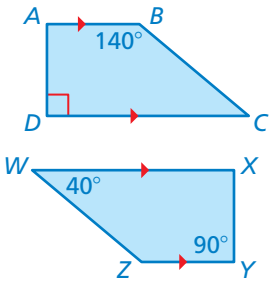
d. What is the perimeter of $ABCDE$?

13. REASONING Here are two ways to draw *one* line to divide a rectangle into two congruent figures. Draw three other ways.



14. CRITICAL THINKING Are the areas of two congruent figures equal? Explain. Draw a diagram to support your answer.

15. True or False? The trapezoids are congruent. Determine whether the statement is *true* or *false*. Explain your reasoning.



a. Side AB is congruent to side YZ.

b. $\angle A$ is congruent to $\angle X$.

c. $\angle A$ corresponds to $\angle X$.

d. The sum of the angle measures of $ABCD$ is 360°.

Fair Game Review *What you learned in previous grades & lessons*

Plot and label the ordered pair in a coordinate plane. *(Skills Review Handbook)*

16. $A(5, 3)$ **17.** $B(4, -1)$ **18.** $C(-2, 6)$ **19.** $D(-4, -2)$

20. MULTIPLE CHOICE You have 2 quarters and 5 dimes in your pocket. Write the ratio of quarters to the total number of coins. *(Skills Review Handbook)*

A $\frac{2}{5}$ **B** 2 : 7 **C** 5 to 7 **D** $\frac{7}{2}$