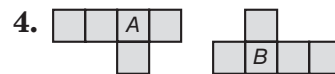
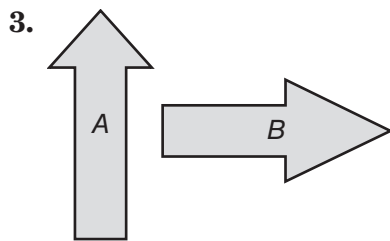
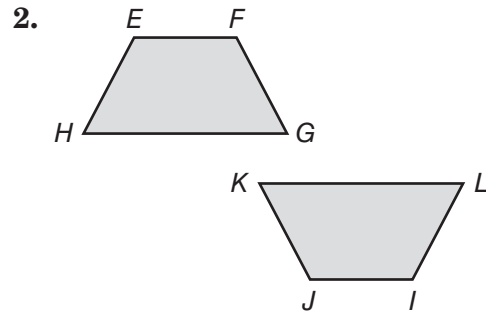
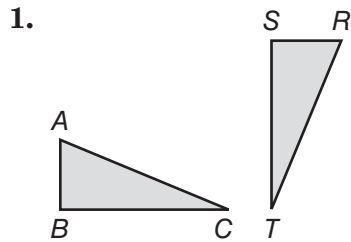


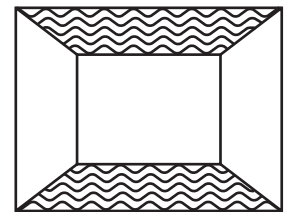
# Lesson 1 Homework Practice

## Congruence and Transformations

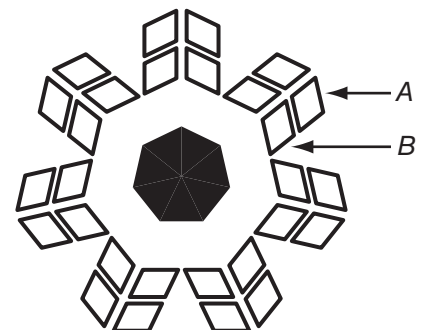
Determine if the two figures are congruent by using transformations. Explain your reasoning.



5. **GRAPHIC DESIGN** The Art Club designed the logo shown. What transformations did they use if the top trapezoid is the preimage and the bottom trapezoid is the image?



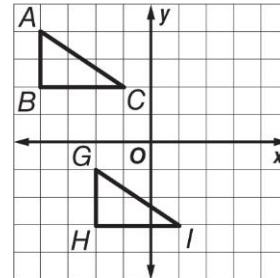
6. **SCRAPBOOKING** Charlotte used a stamp to create the pattern shown. What transformations did she use if parallelogram A is the preimage and parallelogram B is the image?



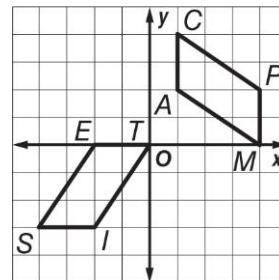
# Lesson 2 Homework Practice

## Congruence

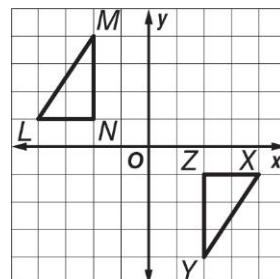
1. Triangles  $ABC$  and  $GHI$  are congruent. Write congruence statements comparing the corresponding parts. Then determine which transformation(s) map  $\triangle ABC$  onto  $\triangle GHI$ .



2. Parallelograms  $CAMP$  and  $SITE$  are congruent. Write congruence statements comparing the corresponding parts. Then determine which transformation(s) map parallelogram  $CAMP$  onto parallelogram  $SITE$ .



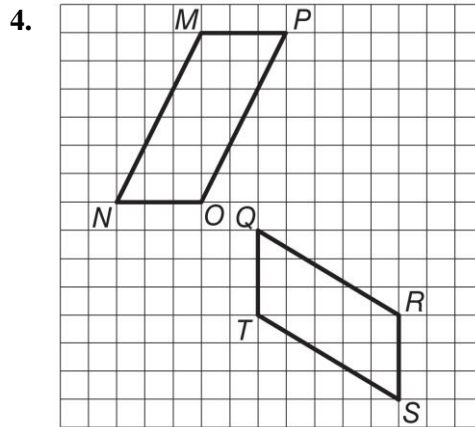
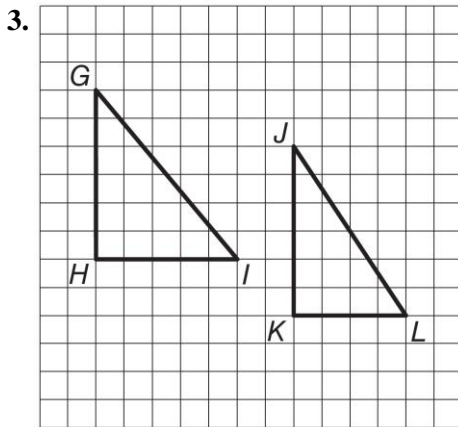
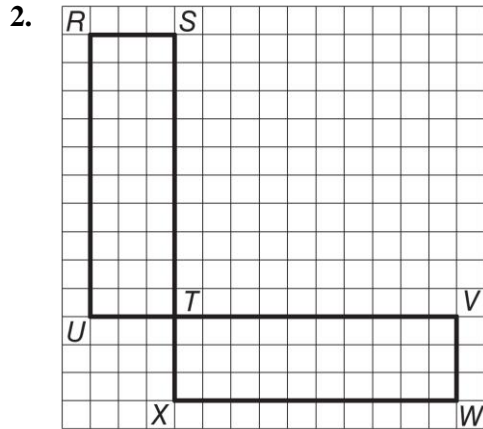
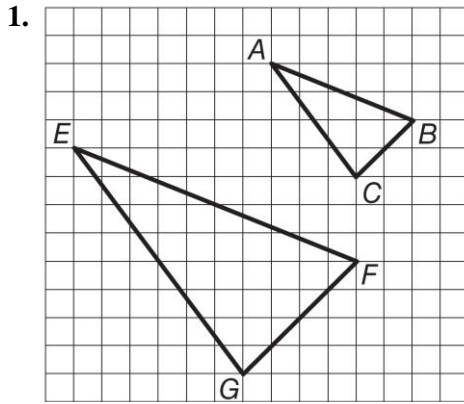
3. Triangles  $LMN$  and  $XYZ$  are congruent. Write congruence statements comparing the corresponding parts. Then determine which transformation(s) map  $\triangle LMN$  onto  $\triangle XYZ$ .



# Lesson 3 Homework Practice

## Similarity and Transformations

Determine if the two figures are similar by using transformations. Explain your reasoning.



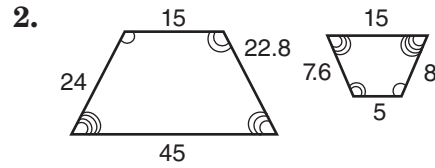
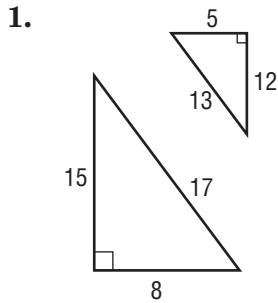
5. **MURALS** Jenna is creating a mural for her bedroom wall. She would like to copy a picture that is 2 inches by 2.5 inches. She uses a copy machine to enlarge it by a factor of 4. Then she projects it on her wall at a factor of 12. What are the dimensions of the mural? Are the pictures similar?

6. **BIOLOGY** Mr. Fletcher is looking at a 0.5 millimeter section of plant under a microscope. The plant section appears enlarged by a scale factor of 10 when looking through the microscope. He uses the camera on the microscope to photograph what is seen through the lenses at a scale factor of 20. What is the length of the section of plant in the photograph?

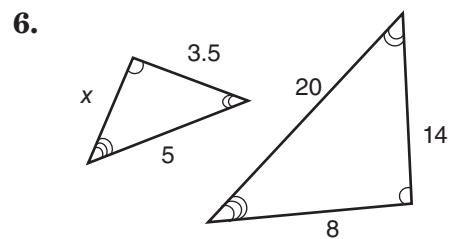
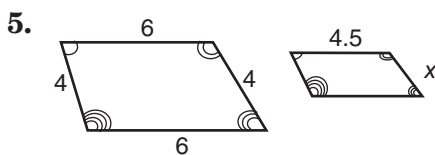
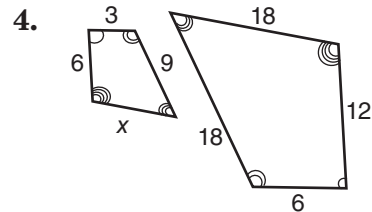
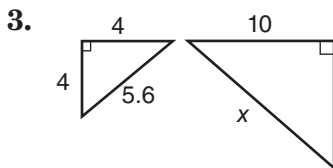
# Lesson 4 Homework Practice

## Properties of Similar Polygons

Determine whether each pair of polygons is similar. Explain.



Each pair of polygons is similar. Find each missing side measure.



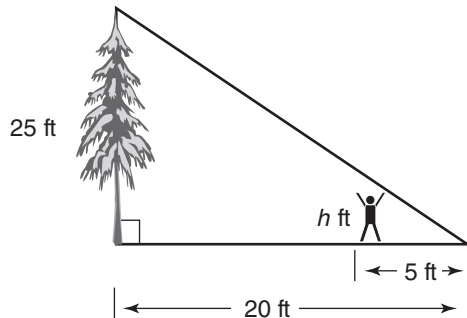
7. **TILES** A blue rectangular tile and a red rectangular tile are similar. The blue tile has a length of 10 inches and a perimeter of 30 inches. The red tile has a length of 6 inches. What is the perimeter of the red tile?

# Lesson 5 Homework Practice

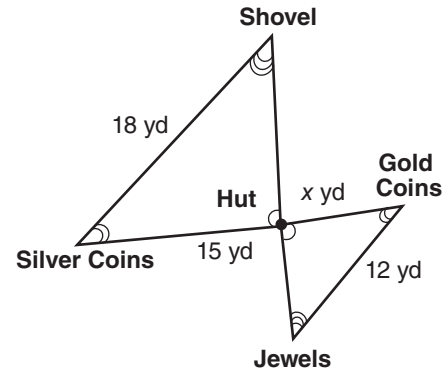
## Similar Triangles and Indirect Measurement

In Exercises 1–4, the triangles are similar. Write a proportion and solve the problem.

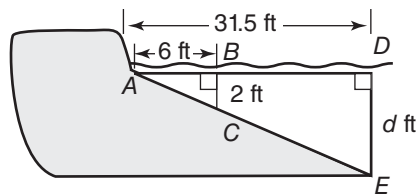
1. **TREES** How tall is Yori?



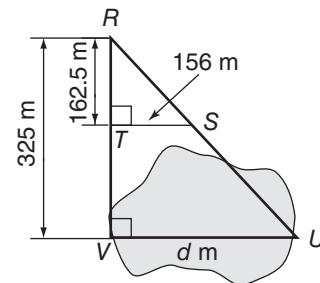
2. **TREASURE HUNT** How far is it from the hut to the gold coins?



3. **LAKE** How deep is the water 31.5 feet from the shore?



4. **SURVEYING** How far is it across the pond?



For Exercise 5, draw a diagram of the situation. Then write a proportion and solve the problem.

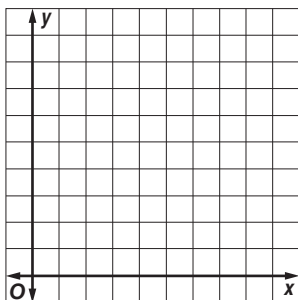
5. **ARCH** The Gateway Arch in St. Louis, Missouri, is 630 feet tall. Suppose a 12-foot-tall pole that is near the Arch casts a 5-foot shadow. How long is the Arch's shadow?

# Lesson 6 Homework Practice

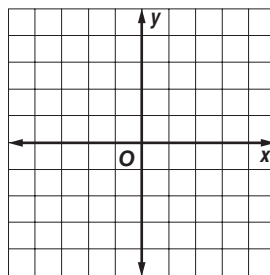
## Slope and Similar Triangles

Graph each pair of similar triangles. Then write a proportion comparing the rise to the run for each of the similar slope triangles and find the numeric value.

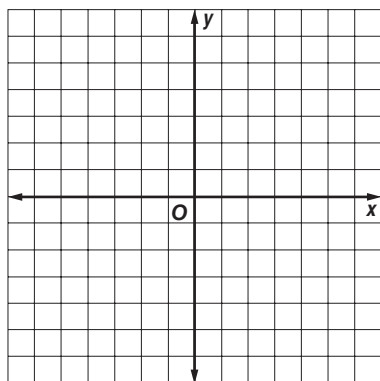
1.  $\triangle EFG$  with vertices  $E(1,9)$ ,  $F(1,5)$ , and  $G(2,5)$ ;  $\triangle GHI$  with vertices  $G(2,5)$ ,  $H(2,1)$ , and  $I(3,1)$



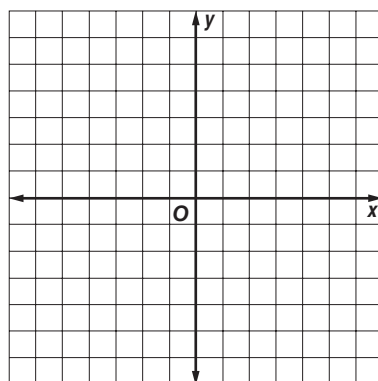
2.  $\triangle JNL$  with vertices  $J(-3,3)$ ,  $N(-3,-3)$ , and  $L(5,-3)$ ;  $\triangle KML$  with vertices  $K(1,0)$ ,  $M(1,-3)$ , and  $L(5,-3)$



3.  $\triangle RST$  with vertices  $R(1,6)$ ,  $S(1,-6)$ , and  $T(-3,-6)$ ;  $\triangle UVW$  with vertices  $U(-1,0)$ ,  $V(-1,-3)$ , and  $W(-2,-3)$



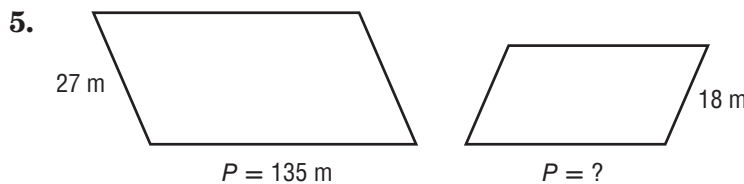
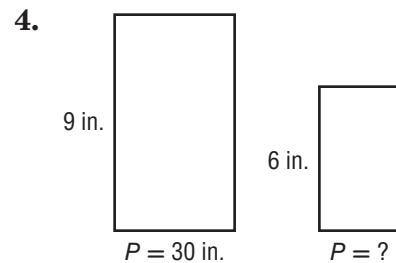
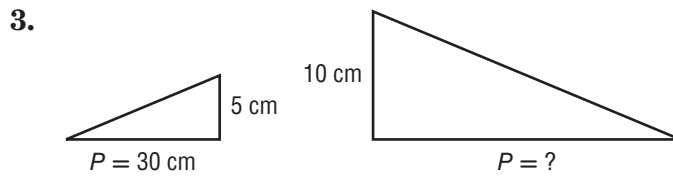
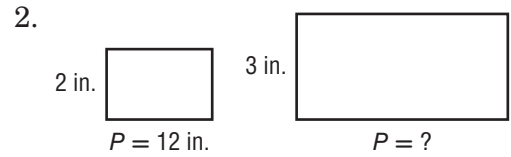
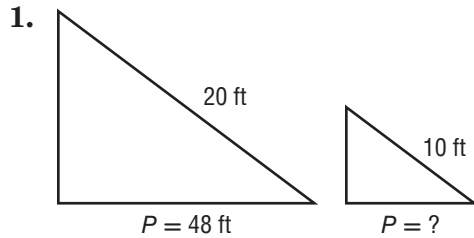
4.  $\triangle DEF$  with vertices  $D(-6,5)$ ,  $E(-6,2)$ , and  $F(-2,2)$ ;  $\triangle FMW$  with vertices  $F(-2,2)$ ,  $M(-2,-4)$ , and  $W(6,-4)$



# Lesson 7 Homework Practice

## Area and Perimeter of Similar Figures

For each pair of similar figures, find the perimeter of the second figure.



6. A triangle has a side length of 4 inches and an area of 18 square inches and a larger similar triangle has a corresponding side length of 8 inches. Find the area of the larger triangle.

7. A rectangle has a side length of 3 feet and an area of 24 square feet. A larger similar rectangle has a corresponding side length of 9 feet. Find the area of the larger rectangle.

8. **FLOWER GARDEN** A rectangular shaped flower garden has a length of 5 yards and an area of 15 square yards. A neighbor's flower garden is similar and has a length of 7 yards. What is the area of the neighbor's flower garden? Round your answer to the nearest whole number.