

8.1

Puzzle Time

What Did One Elevator Say To The Other Elevator?

A	B	C	D	E	F
G	H	I			

Complete each exercise. Find the answer in the answer column. Write the word under the answer in the box containing the exercise letter.

120 MOUSE
square AM
side UP
40 SOMETHING
equal I
36 AND
corresponding THINK
100 WITH
similar GOING

Complete the sentence.

- A.

A similarity transformation preserves \_\_\_\_\_ measure.
- B.

A similarity transformation also enlarges or reduces side lengths by a \_\_\_\_\_ factor  $k$ .
- C.

If two polygons are similar, then the ratio of any two \_\_\_\_\_ lengths in the polygons is equal to the scale factor of the similar polygons.
- D.

If two polygons are similar, then the ratio of their perimeters is \_\_\_\_\_ to the ratios of their corresponding side lengths.
- E.

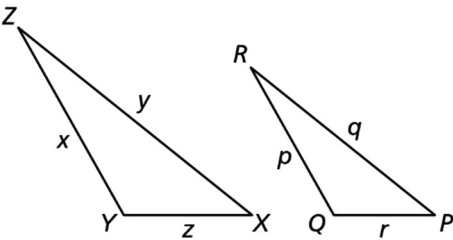
If two polygons are similar, then the ratio of their areas is equal to the \_\_\_\_\_ of the ratios of their corresponding side lengths.

Triangles  $XYZ$  and  $PQR$  are similar. Find the indicated value.

- F.

$p = 15, q = 21,$   
 $r = 9, x = 20,$   
 $z = 12$ ; Find  $y$ .
- G.

Find the scale factor from  $\triangle XYZ$  to  $\triangle PQR$ .

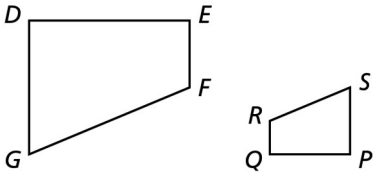


Polygons  $DEFG$  and  $PQRS$  are similar. Find the indicated value.

- H.

The perimeter of  $PQRS$  is 60 inches, and the ratio of the side lengths is  $\frac{3}{5}$ . Find the perimeter of  $DEFG$ .
- I.

The perimeter of  $DEFG$  is 280 inches, and the ratio of the side lengths is  $\frac{1}{7}$ . Find the perimeter of  $PQRS$ .



28 COMING
areas AIR
21 WRONG
$\frac{3}{4}$ DOWN
double HIGH
scale I
70 RED
$\frac{1}{4}$ FAST
angle HEY

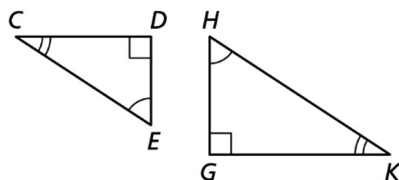
# 8.2 Puzzle Time

## What Gets Wetter The More It Dries?

Write the letter of each answer in the box containing the exercise number.

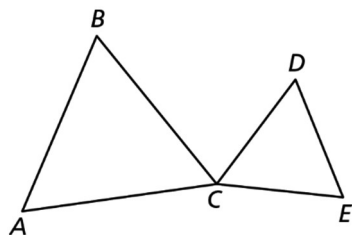
- Complete the sentence. If two angles of one triangle are congruent to two angles of another triangle, then the two triangles are \_\_\_\_\_.

Use the diagram.



- If  $m\angle C = 36^\circ$ , then  $m\angle H = 54^\circ$ . True or false?
- Complete the statement.  $\triangle EDC \sim \triangle$  \_\_\_\_\_
- If  $m\angle E = 73^\circ$ , find  $m\angle K$ .

Use the diagram.



- $m\angle A = 42^\circ$ ,  $m\angle D = 95^\circ$ ,  $m\angle E = 42^\circ$ ,  $\angle B \cong \angle D$ ; Find  $m\angle ACB$ .
- $m\angle A = m\angle E = m\angle ACB = m\angle ECD = 59^\circ$ ; Find  $m\angle D$ .

### Answers

- K.  $73^\circ$
- L.  $17^\circ$
- U. false
- T.  $62^\circ$
- A. congruent
- M. right angle
- W. similar
- E.  $43^\circ$
- I.  $EDC$
- O. true
- D.  $42^\circ$
- A.  $HGK$
- B.  $KGH$

3		6	2	1	5	4
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