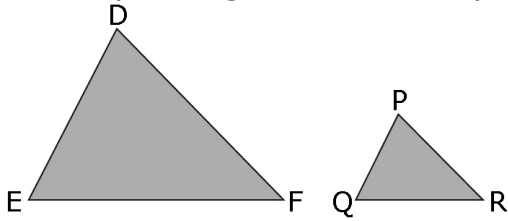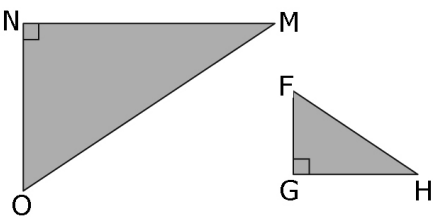# C3 Similar Polygons - Worksheet #1

1. The following are pairs of similar triangles. List the corresponding angles and the corresponding sides in each pair of triangles.
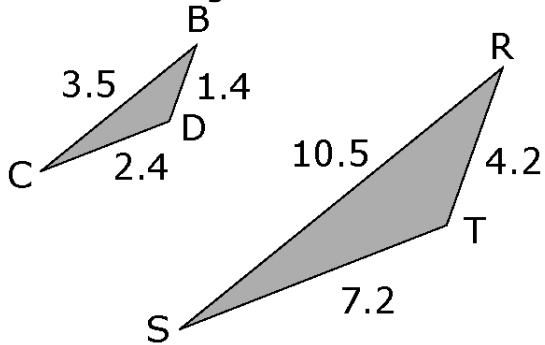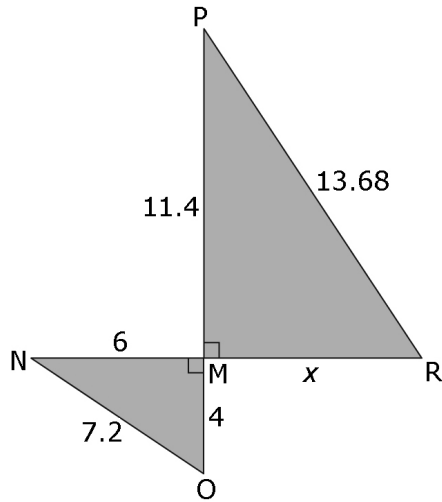
   a)

   b)

2. Are the triangles similar? Show how you know using ratios.

4. △MNO is similar to △MPR. Calculate the missing length, x, to the nearest tenth. *Hint: Compare the corresponding sides to determine the scale factor. Use the scale factor to solve for the missing length.*

P

13.68

11.4

6

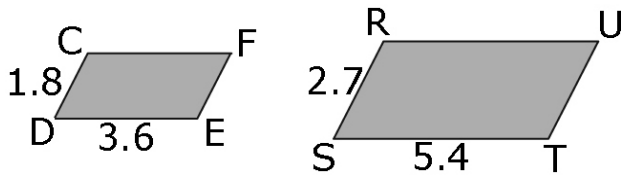N

M x R

4

7.2

O

5. The two vertical supports on a ramp form two triangles. △ABC is similar to △DEC. Find the height of the ramp by calculating the missing length, y. Show your work.
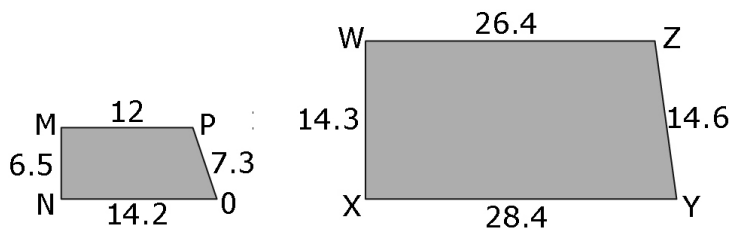
A

D

y

1.5 m

B   E   C

←——3 m——→

←———5 m———→
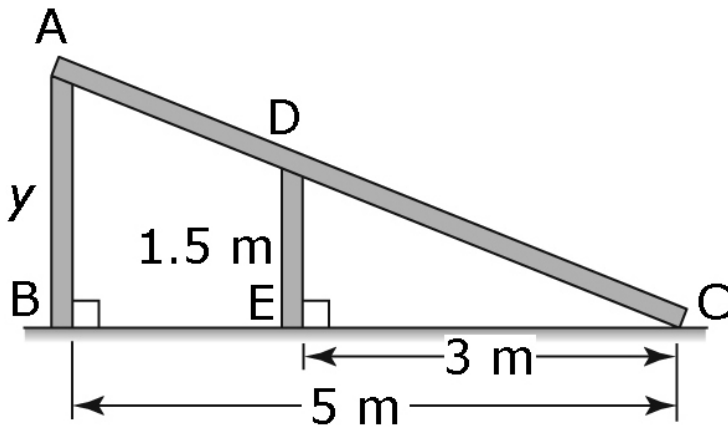
C3 Similar Polygons - Worksheet #2

1. Decide if each pair of polygons is similar. Show your reasoning.
   a) CDEF and RSTU are parallelograms.

   C___F   R_____U
   1.8/ /   2.7/   /
   D 3.6 E   S   5.4   T

   b)

   M 12 P   14.3 W____26.4____Z
   6.5/ /7.3   /   /
   N 14.2 0   X   28.4   Y   14.6
                  W   Z
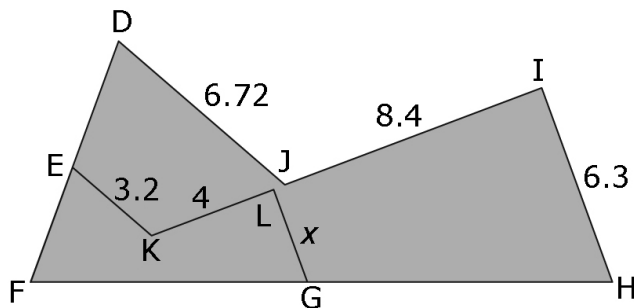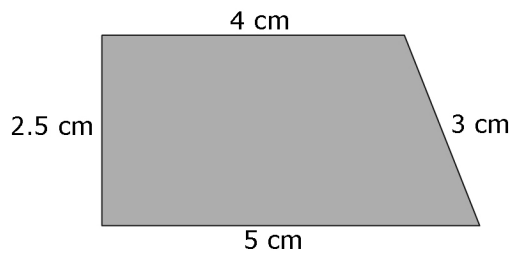   14.3   14.6
                  X   28.4   Y

2. The two pentagons DFHIJ and EFGLK are similar. Determine the missing length, *x*. Show your work.

   D
     6.72   I
   E   8.4
   3.2 4   6.3
      J
   K   L x
   F   G   H

3. The trapezoid is a scale drawing of a cattle pasture. The actual length of the shortest side of the pasture is 200 m.

4 cm

2.5 cm

3 cm

5 cm

a) Determine the actual   length of the other sides of the pasture. Show your work. *Hint: 200 m = 20 000 cm*

b) How long is the fence surrounding the pasture? Show your work.