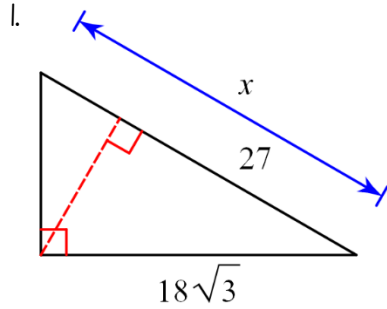Name: _____

6.4.D2 – More Similar Triangles

Past due on: _____ Period: _____

Use similar right triangle relationships to find the value of x. If necessary, give the answer in simplest radical form.

1.

x

27

$18\sqrt{3}$

2.

$4\sqrt{65}$

16
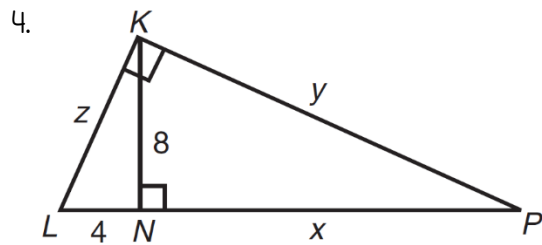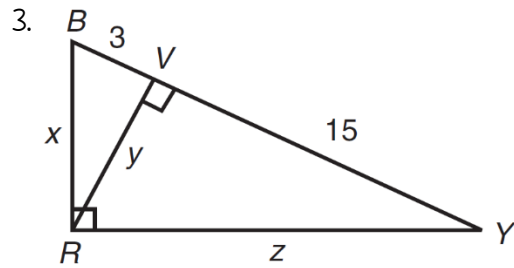
x
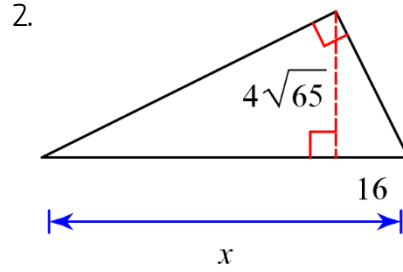
Use similar right triangle relationships and/or the Pythagorean Theorem to find the values of $x, y, \& z$. If necessary, give the answer in simplest radical form.

3. B 3 V

x

y

15

R z Y

4. K

z

8

y

L 4 N x P

5. W

y

x z

C

25

P 4 H
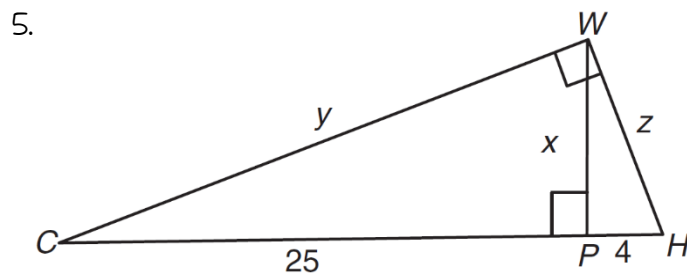
6. To estimate the length of the USS *Constitution* in Boston harbor, a student locates points *T* and *U* as shown. What is *RS* to the nearest tenth of a meter?

R

S

U (T (60 m
4 m
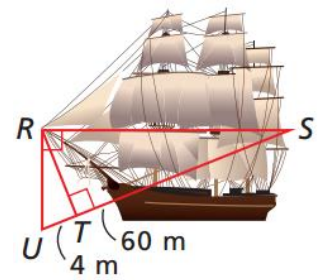
7. To estimate the height of the Taipei 101 tower, Andrew stands so that his lines of sight to the top and bottom of the tower forms a 90° angle. What is the height of the tower to the nearest foot?

91 ft 3 in.

5 ft
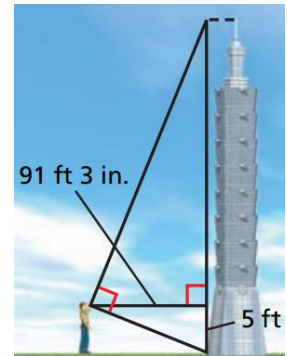
8. You are on a fishing trip with your friends. The diagram shows the location of the river, fishing hole, camp site, and bait store. The camp site is located 200 feet from the fishing hole. The bait store is located 110 feet from the fishing hole. How wide is the river?

Bait store

River

Fishing hole

Camp site
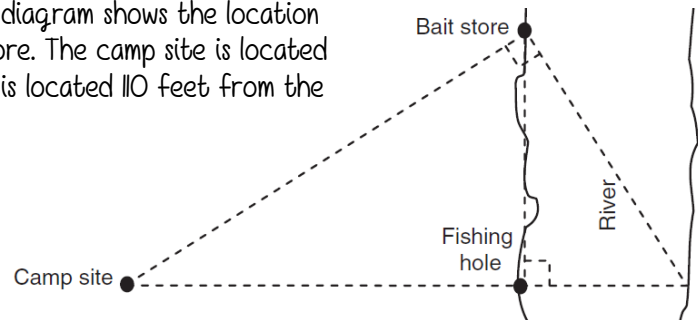
9. Marsha wants to walk from the parking lot through the forest to the clearing, as shown in the diagram. She knows that the forest ranger station is 154 feet from the flag pole and the flag pole is 350 feet from the clearing. How far is the parking lot from the clearing?

Clearing

Flag pole

Forest ranger station

Forest

Parking lot
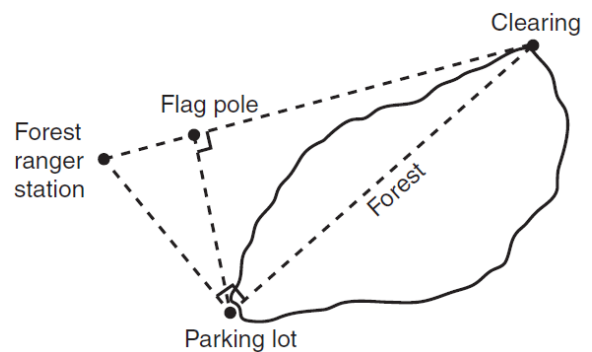
10. Andre is camping with his uncle at one edge of a ravine. The diagram shows the location of their tent. The tent is 1.2 miles from the fallen log and the fallen log is 0.75 miles from the observation tower. To the nearest hundredth of a mile, how wide is the ravine?

Tent

Ravine

Observation tower

Fallen log

Chapter 6: Similarity Through Transformations