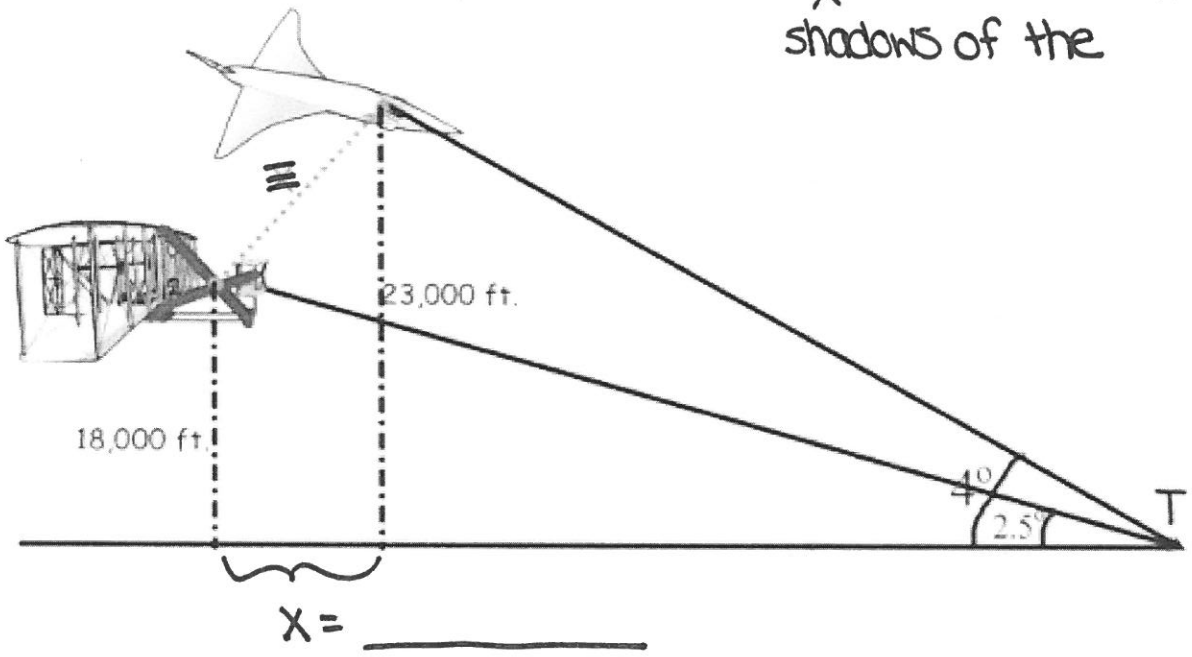
Ophelia Payne is walking to her office building which she knows is 150ft high. The angle to the top of the building from her current location is 6°. How much further does she need to walk?

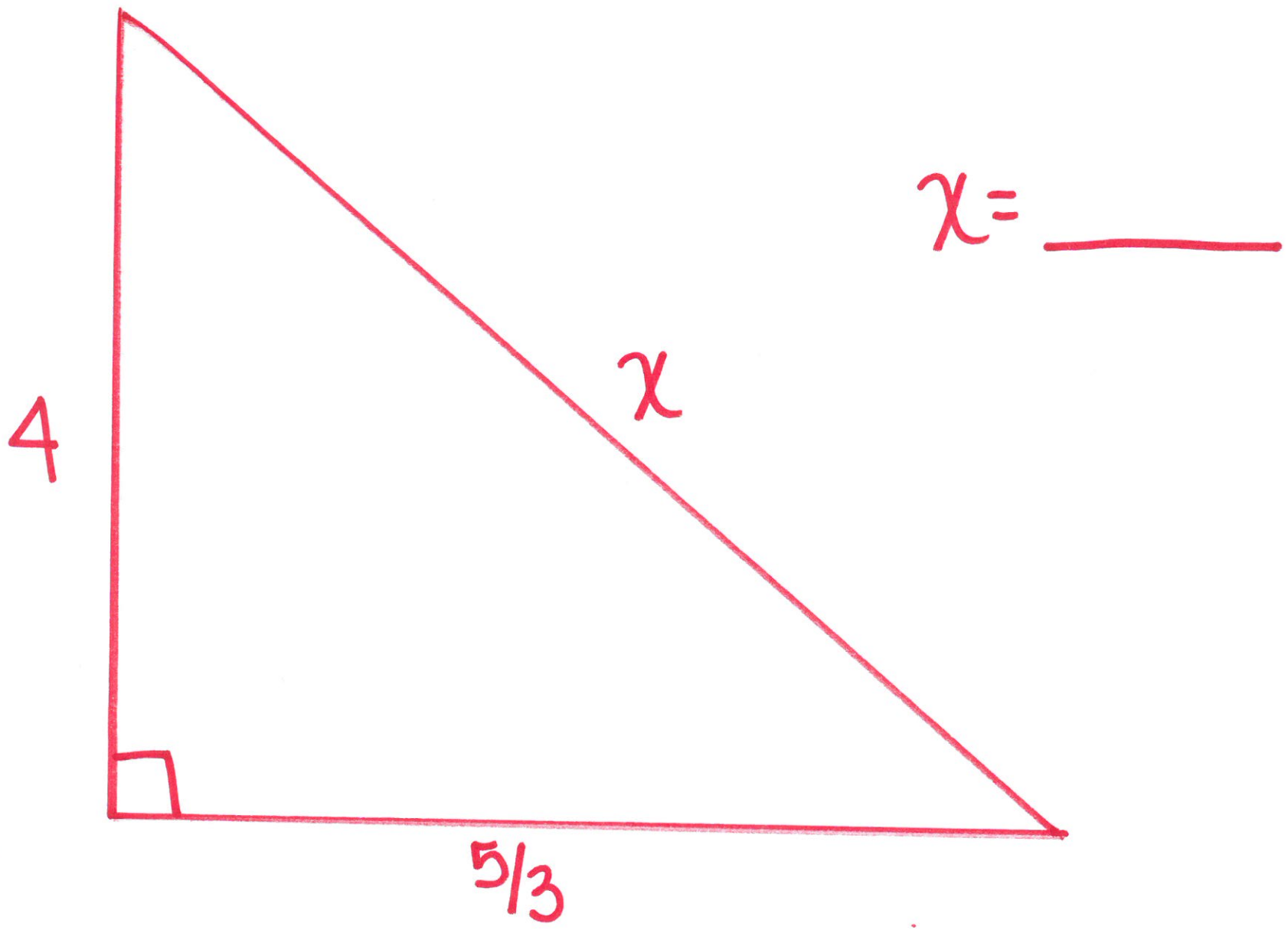
1427

7) Two airplanes, at points A and B as shown in the diagram below, have elevations of 23,000 ft. and 18,000 ft. respectively.
Both are flying east toward an airport control tower at T.
From T, the angle of elevation of the airplane at A is 4°, and the angle of elevation of the airplane at B is 2.5°. How far apart (in mi) are the airplanes? (Find x).

shadows of the



83,352



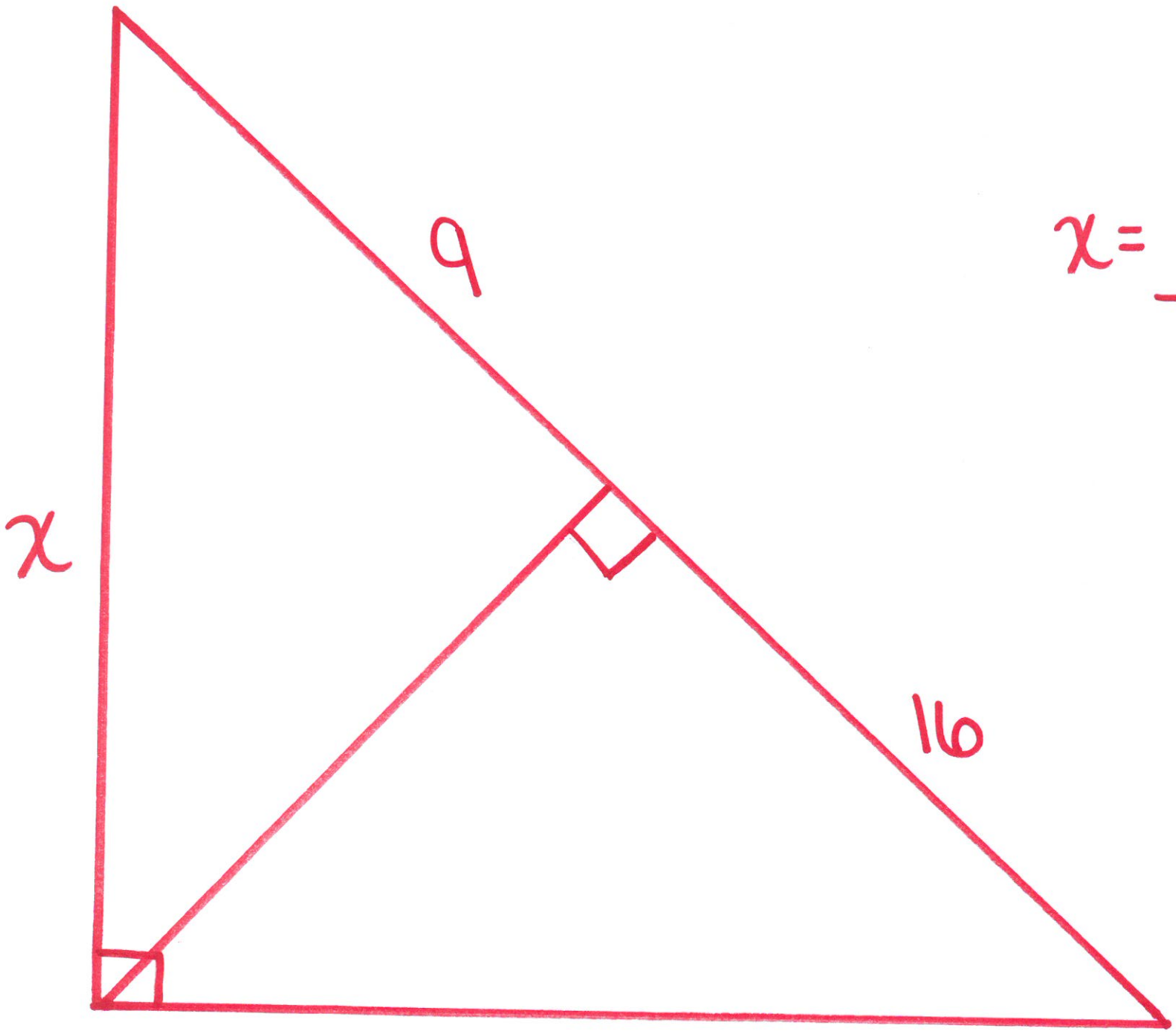
$x =$ _____

13/3

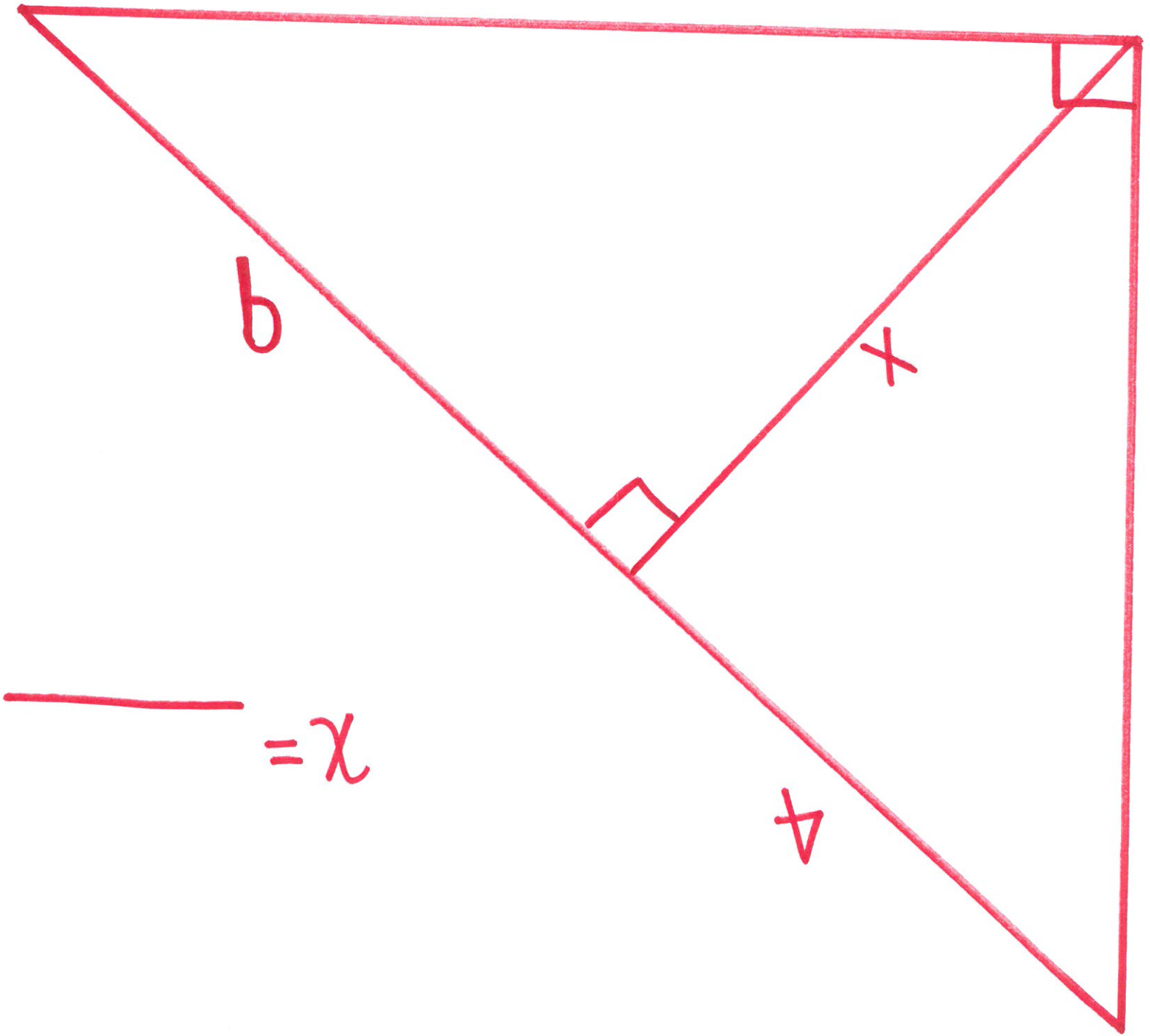
4
5√3
x°
x =

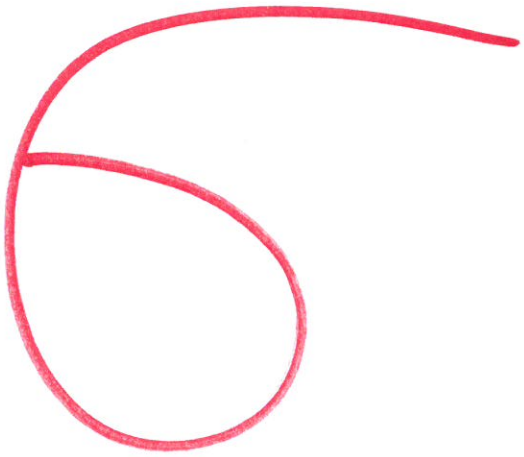
67.4

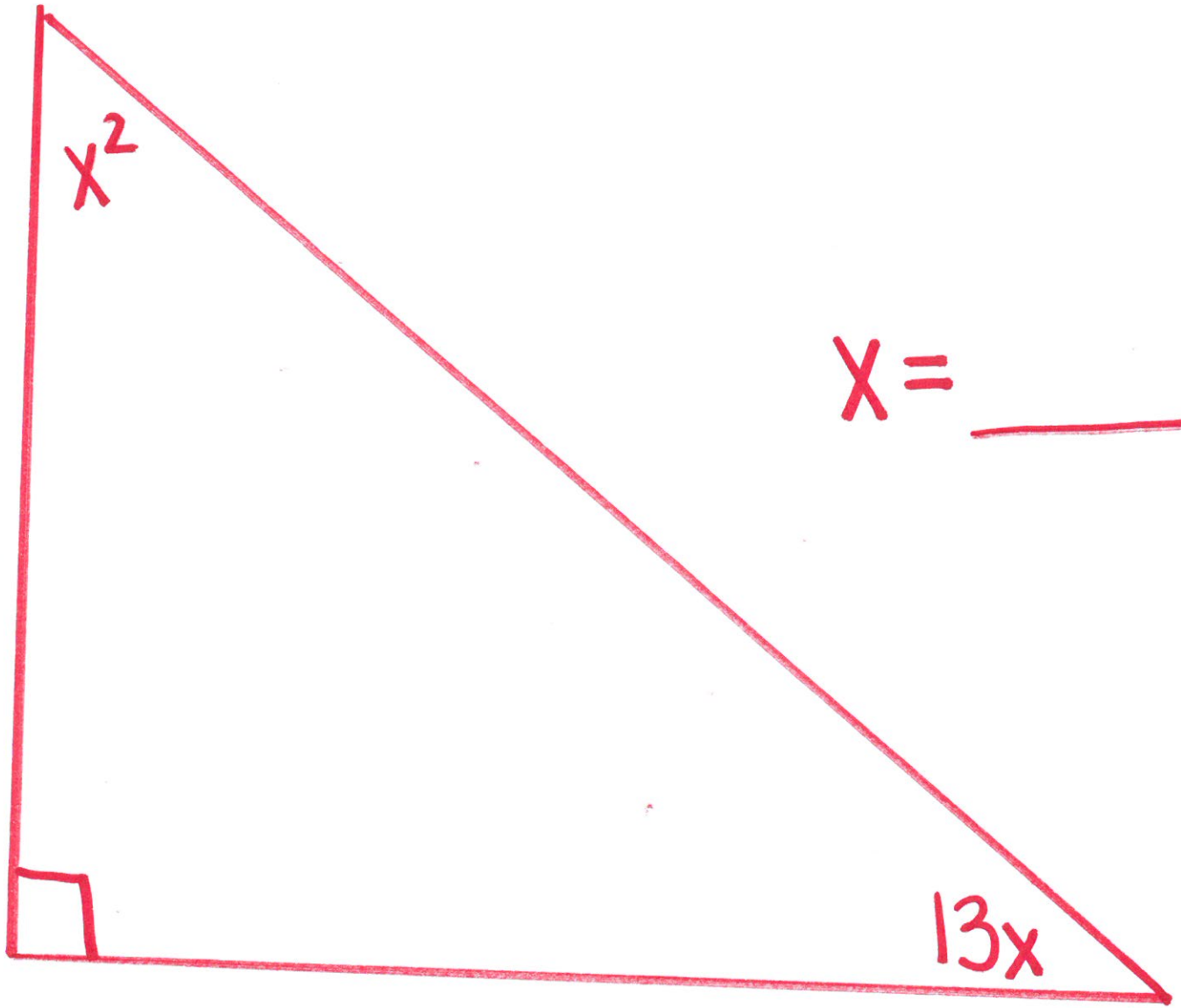
A damsel is in distress and is being held captive in a tower. Her knight in shining armor is on the ground below with a ladder. When the knight stands 15 feet from the base of the tower and looks up at his precious damsel, the angle of elevation to her window is 60 degrees. How long does the ladder have to be?



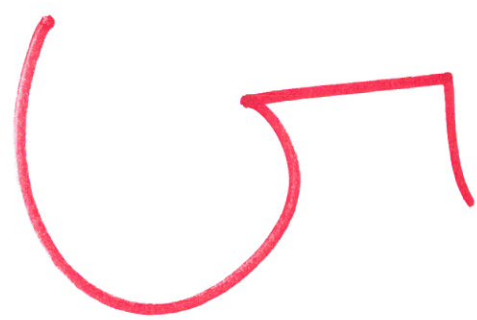
$x =$ _____

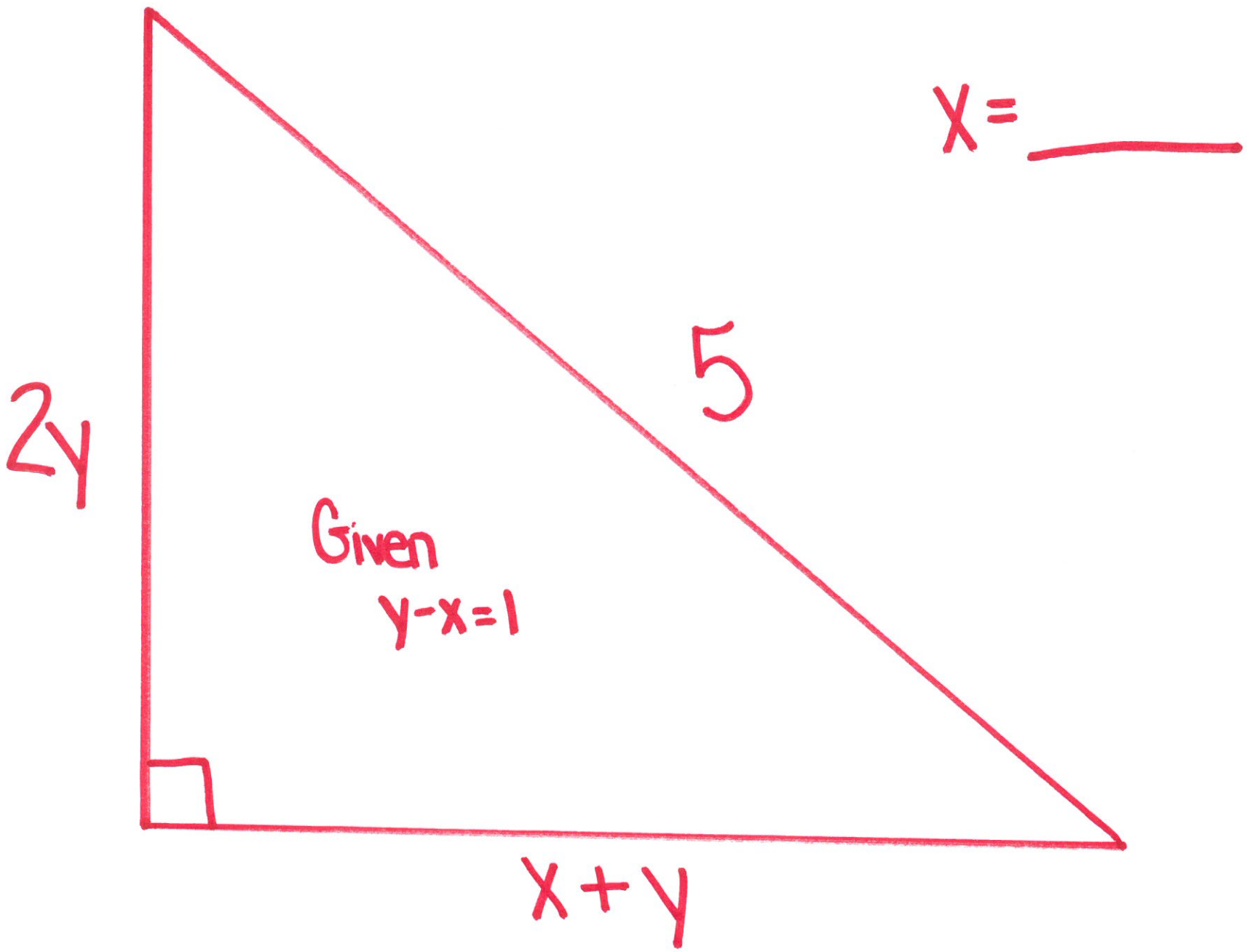

b
x
4
= x

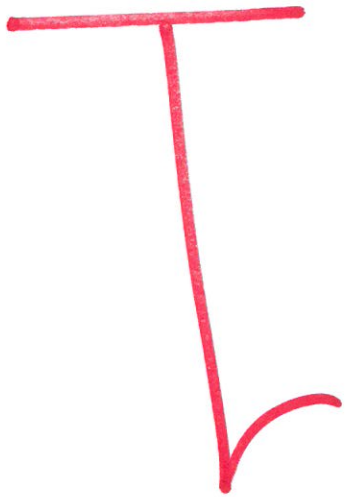




$X =$ _____




X = ____
2y
5
Given
y-x=1
x+y

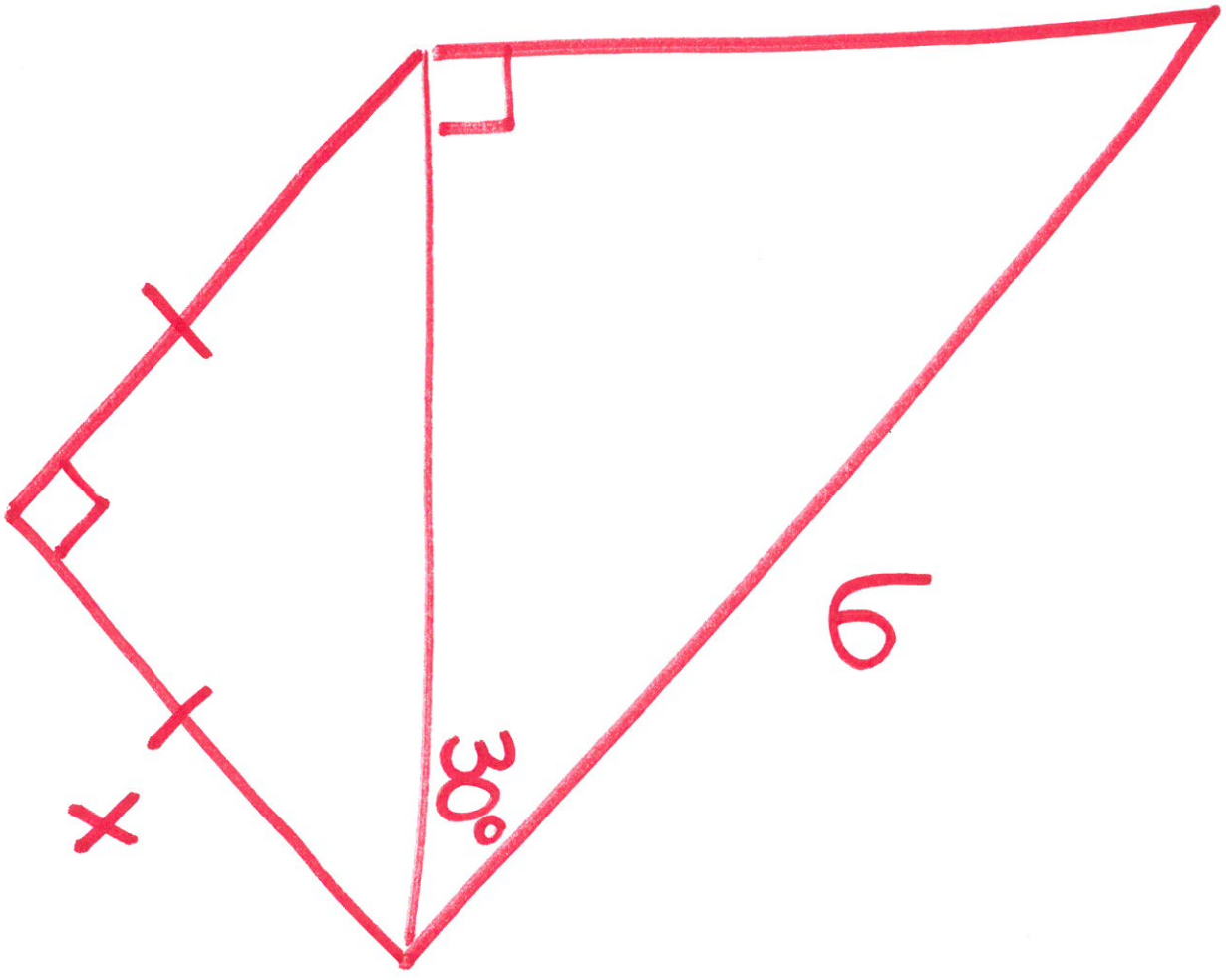


4
5
x°

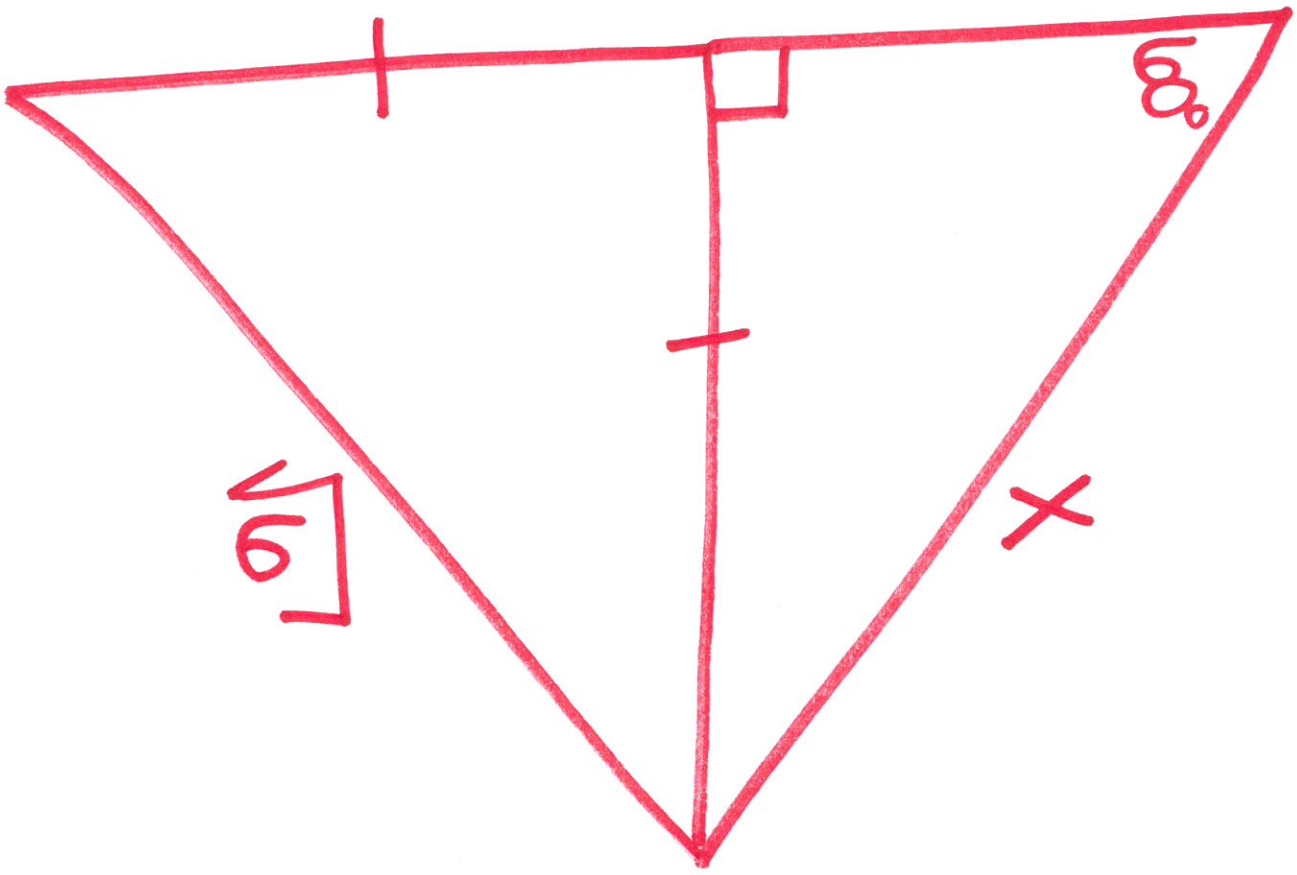
38.7

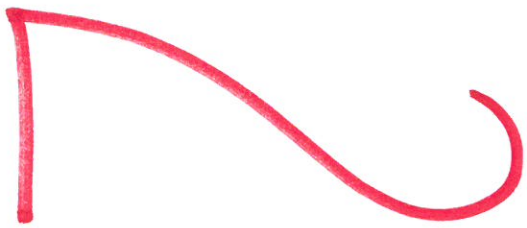
Nancy stood on a ladder. Her eyes were 9 feet above the ground. On the ground, 10 feet away, was a lizard. What is the angle of depression from Nancy's eyes to the lizard?

42


x
x
30°
6

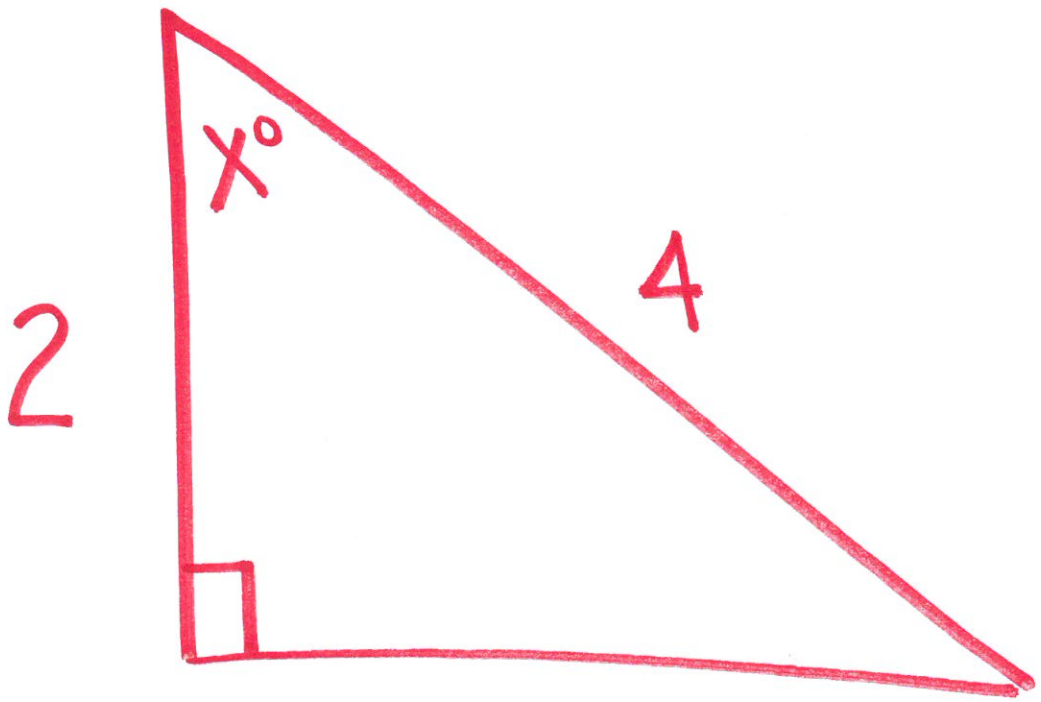
2/3


60
6
x

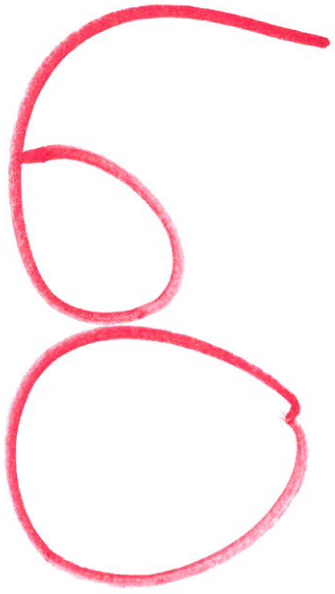


Brothers Bob and Tom Katz buy a tent that has a center pole 6.25 feet high. If the sides of the tent are supposed to make a 50° angle with the ground, how wide is the tent?

10

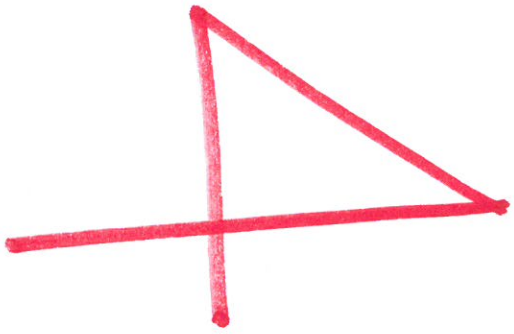


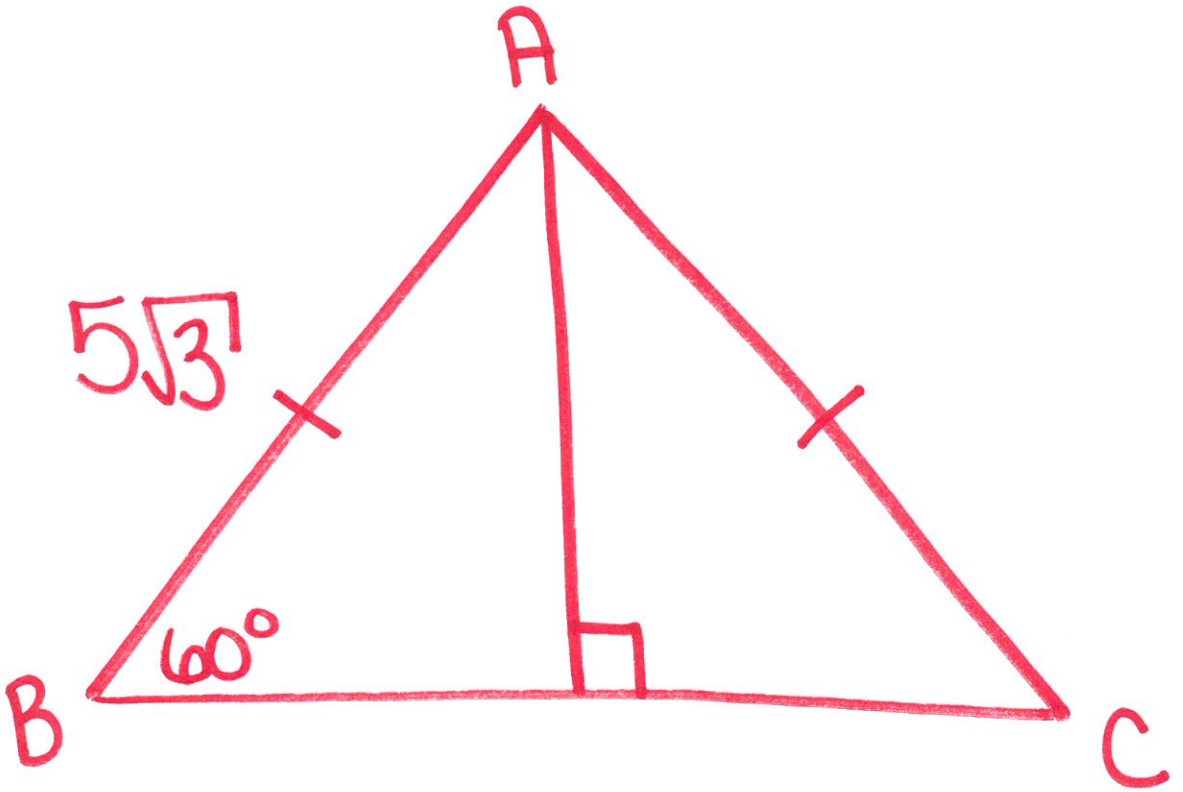
$x =$ _____



$$2x - y = 7$$

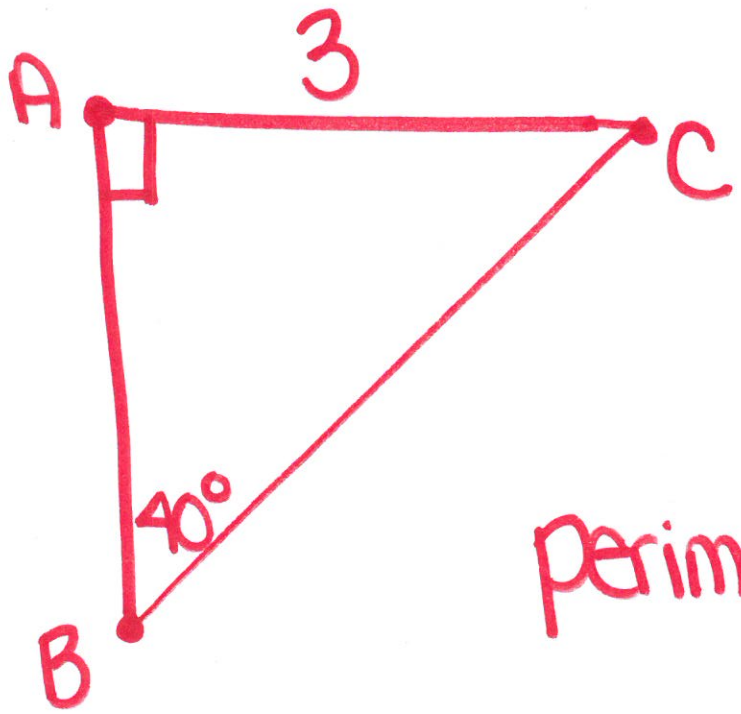
$$x + 2y = 13$$





Area of $\triangle ABC$ = _____

$$\frac{75}{4}\sqrt{3}$$



perimeter of

$\Delta ABC =$ _____

11.24

Two hikers are on opposite sides of a wooden plank bridge that spans a canyon. They are each 765 meters above the bottom of the canyon. They both site the same landmark on the bottom of the canyon floor. The angles of depression from each hiker are 38 degrees and 24 degrees. How long is the wooden plank bridge?

2697