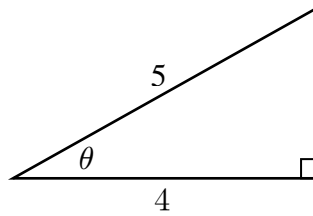
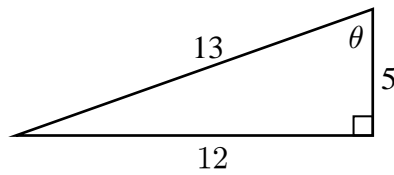


2. Consider the following right triangle:



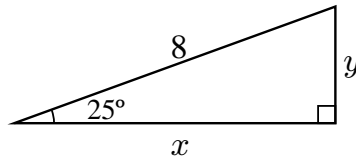
- (a) Determine the length of the side opposite θ .
- (b) What is $\sin \theta$?
- (c) What is $\cos \theta$?
- (d) What is $\tan \theta$?

3. Consider the following right triangle:



- (a) What is $\sin \theta$?
- (b) What is $\cos \theta$?
- (c) What is $\tan \theta$?

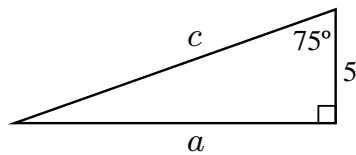
4. Consider the following right triangle:



(a) What is x ?

(b) What is y ?

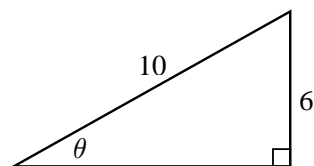
5. Consider the following right triangle:



(a) What is a ?

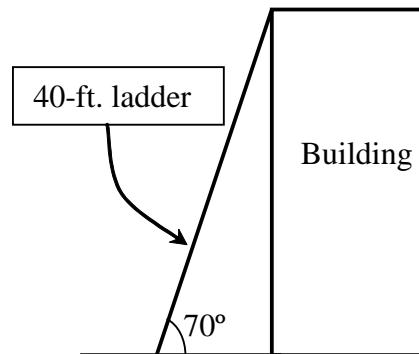
(b) What is c ?

6. Consider the following right triangle:



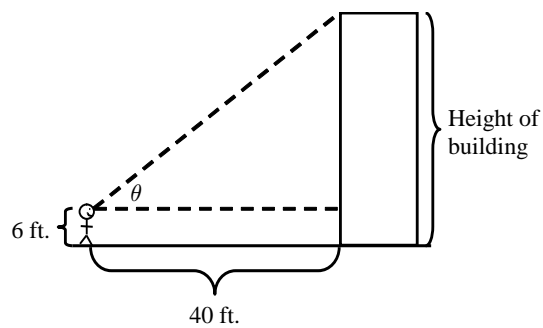
Determine the measure of the angle θ .

7. A ladder leans against a building as shown in the following picture.



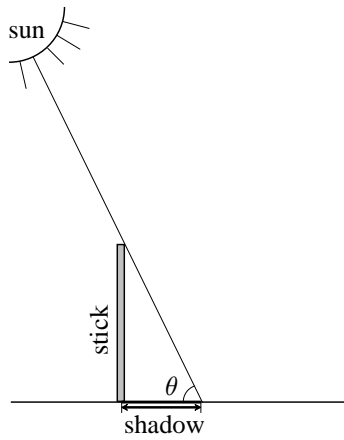
Determine the height of the building.

8. Thomas wishes to determine the height of a building. He stands 40 feet away from the building as shown below:



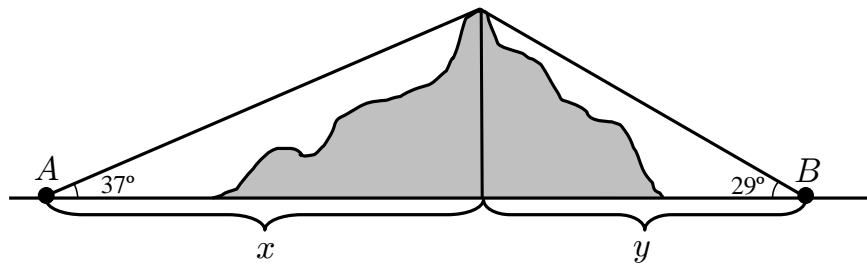
If $\theta = 37^\circ$, what is the height of the building? (Remember to include Thomas's height.)

9. A stick casts a shadow as shown in the following picture:



If the stick is 5 feet tall, and the shadow is 2 feet long, what is the measure of the angle θ ?

10. A mountain is between two cities A and B as shown in the following picture:



If the mountain is one mile high, determine the distance between the two cities.