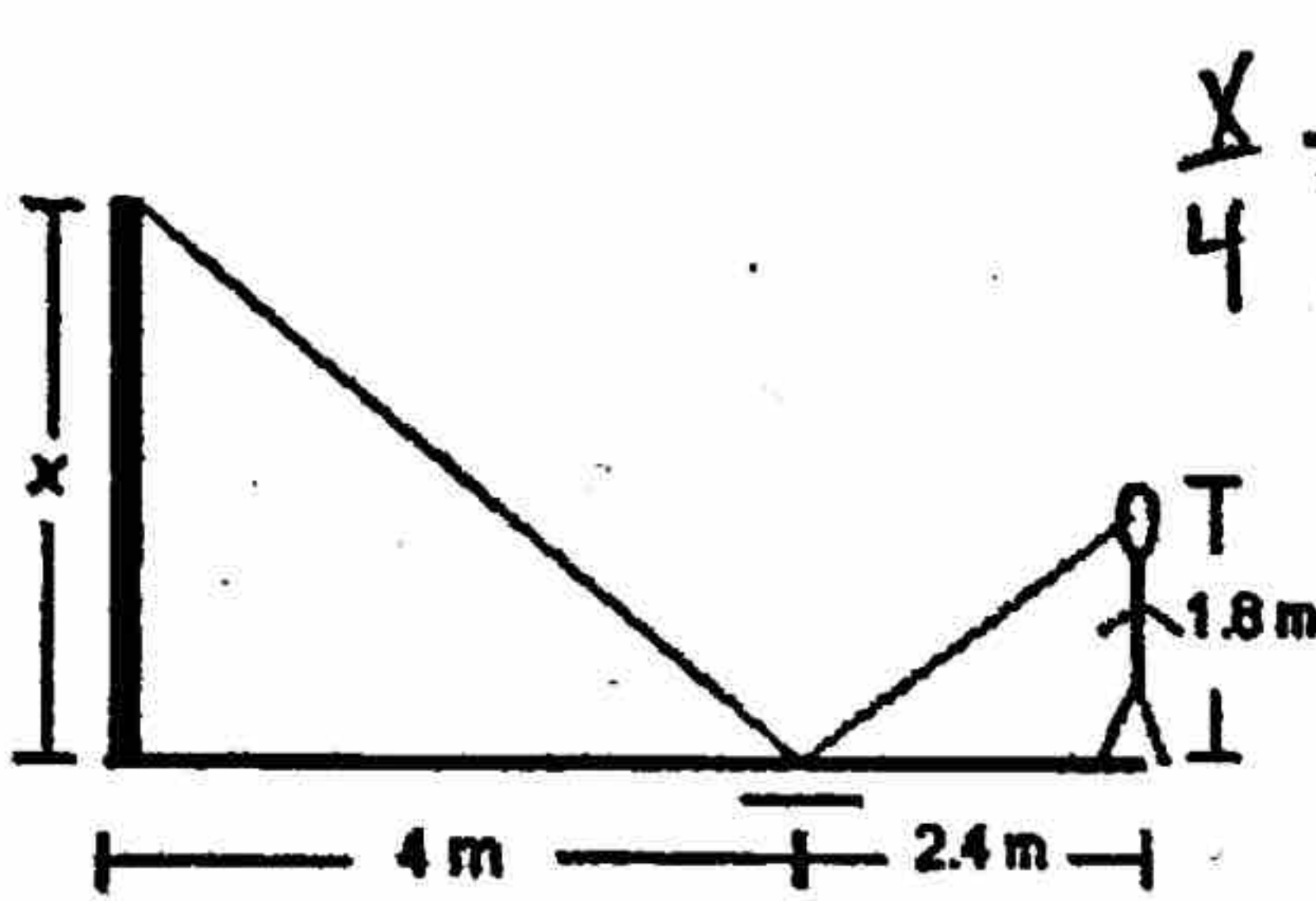


Key

Name: \_\_\_\_\_

### Similar Triangles Word Problems

1. A statue, honoring Kobe Bryant, can be found in Los Angeles near the Staples Center. Use the information below to determine the unknown height of the statue.



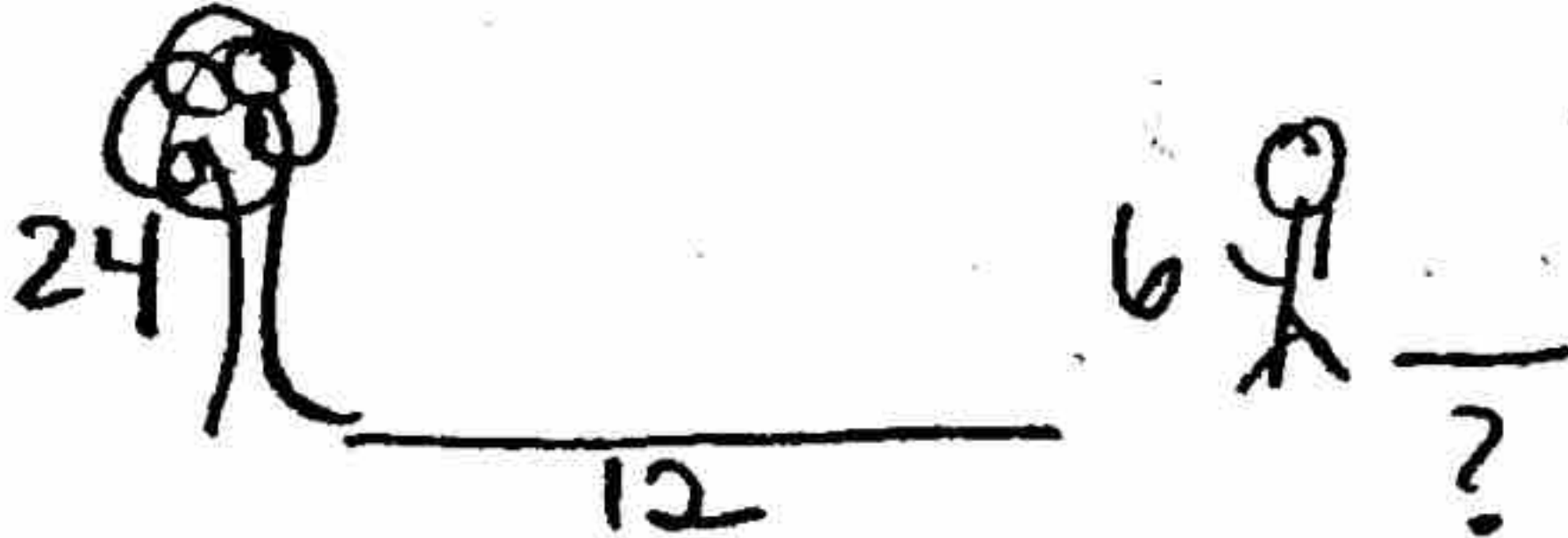
$$\frac{x}{4} = \frac{1.8}{2.4}$$



$$2.4x = 7.2$$

$$x = 3m$$

2. A tree 24 feet tall casts a shadow 12 feet long. Brad is 6 feet tall. How long is Brad's shadow?



$$\frac{x}{6} = \frac{12}{24}$$

$$24x = 72$$

$$x = 3$$

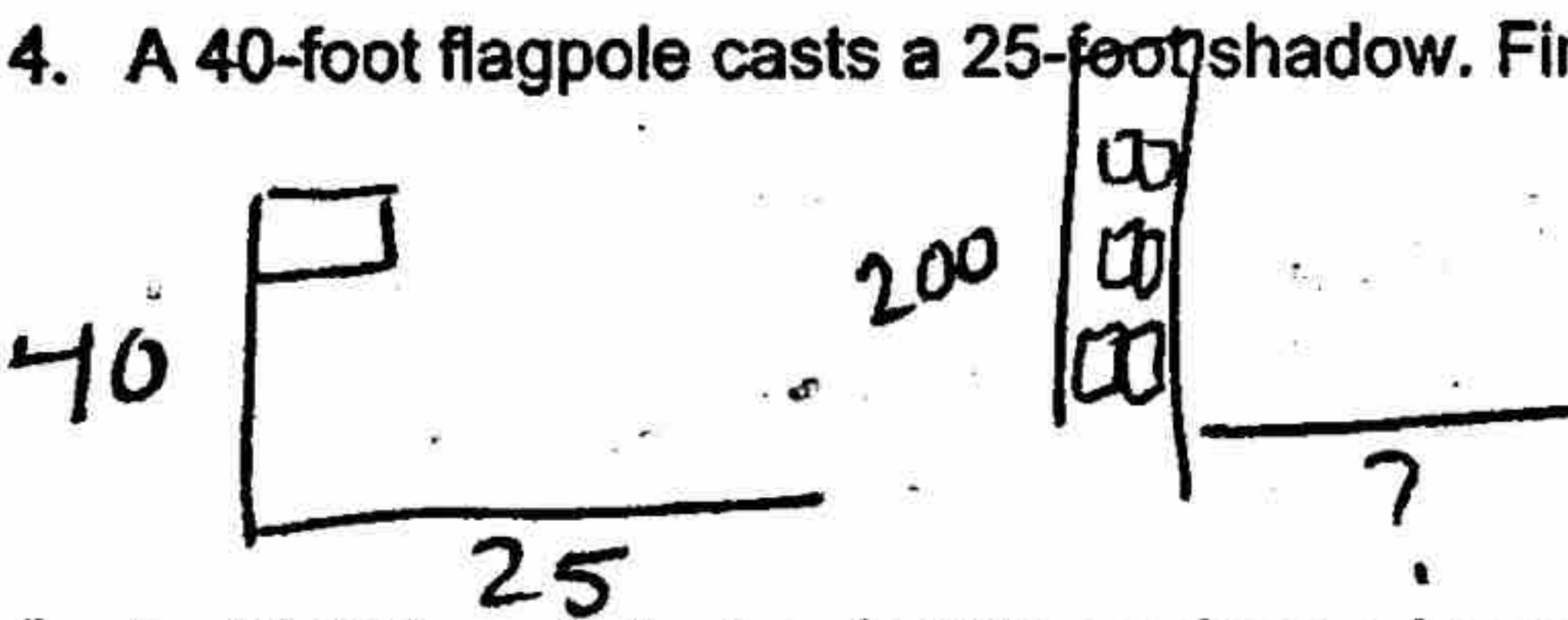
3. Triangles EFG and QRS are similar. The length of the sides of EFG are 144, 128, and 112. The length of the smallest side of QRS is 280, what is the length of the longest side of QRS?

$$\frac{x}{280} = \frac{144}{112}$$

$$112x = 40320$$

$$x = 360$$

4. A 40-foot flagpole casts a 25-foot shadow. Find the shadow cast by a nearby building 200 feet tall.

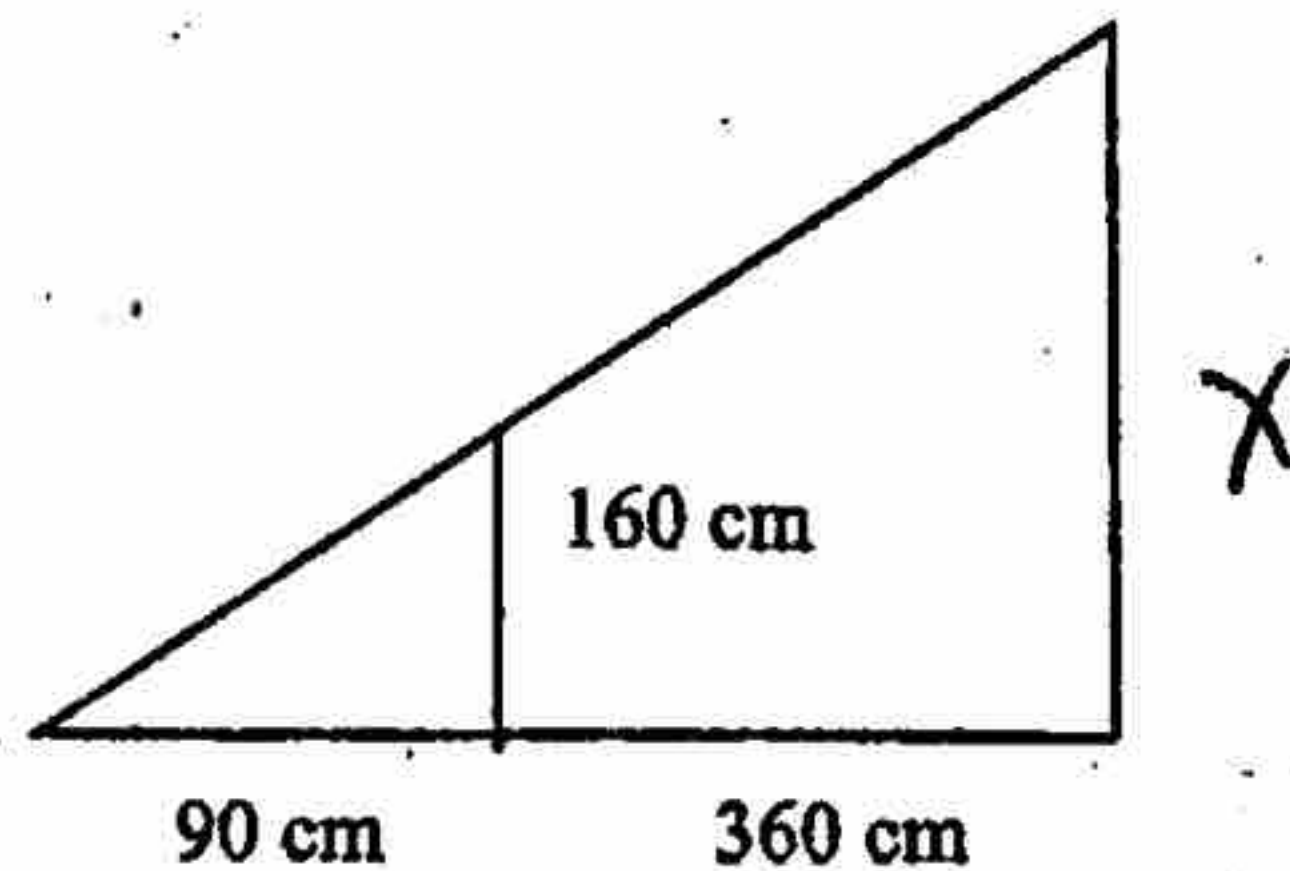


$$\frac{x}{200} = \frac{25}{40}$$

$$40x = 5000$$

$$x = 125$$

5. A girl 160 cm tall, stands 360 cm from a lamp post at night. Her shadow from the light is 90 cm long. How high is the lamp post?

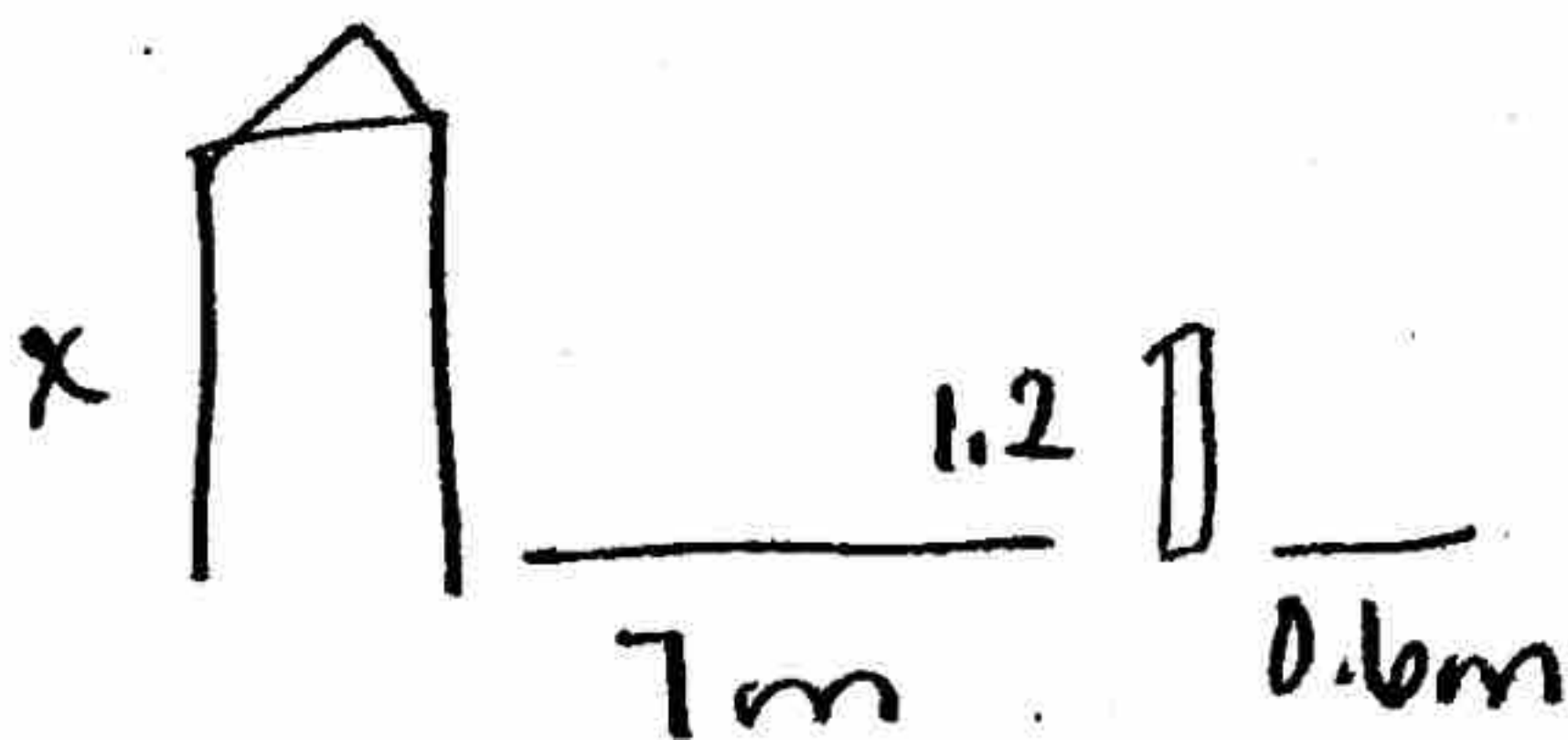


$$\frac{x}{450} = \frac{160}{90}$$

$$90x = 72000$$

$$x = 800cm$$

6. A tower casts a shadow 7 m long. A vertical stick casts a shadow 0.6 m long. If the stick is 1.2 m high, how high is the tower?



$$\frac{x}{7} = \frac{1.2}{0.6}$$

$$0.6x = 8.4$$

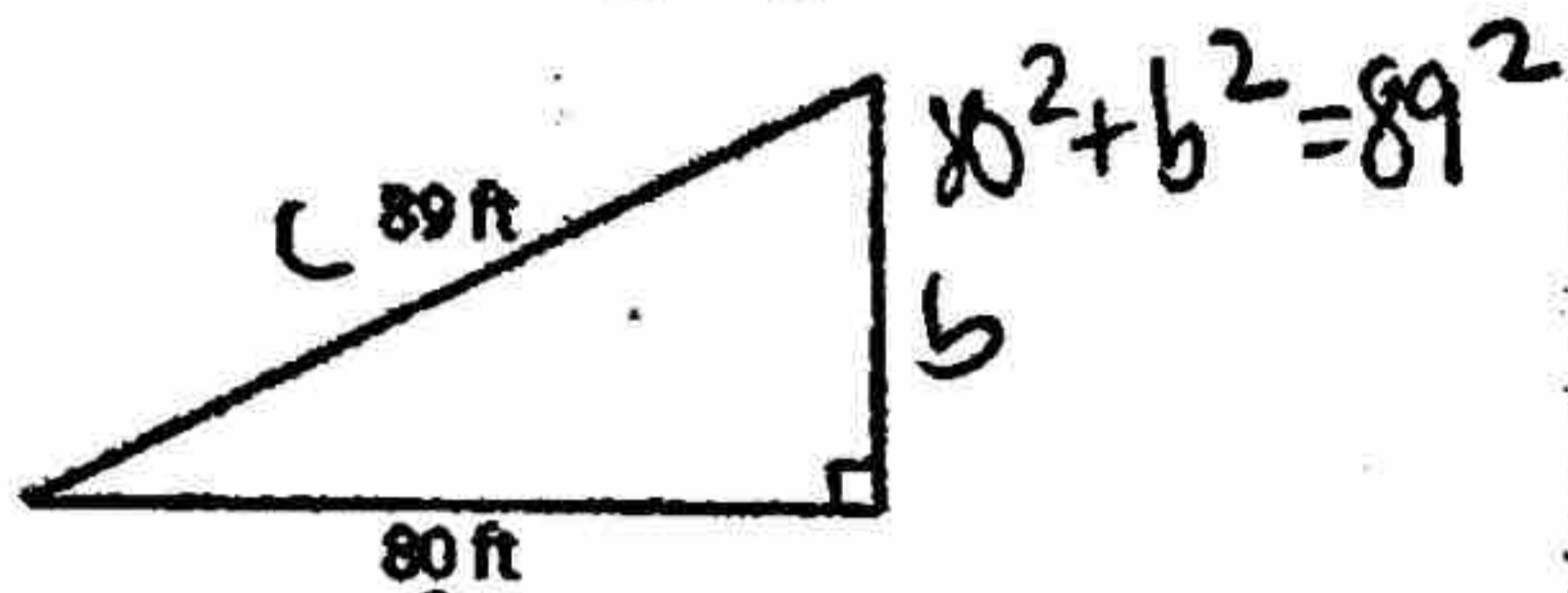
$$x = 14m$$



**MODULE 12 MIXED REVIEW**  
**Assessment Readiness**

**Selected Response**

1. What is the missing length of the side?



- (A) 9 ft
- (B) 30 ft
- (C) 39 ft
- (D) 120 ft

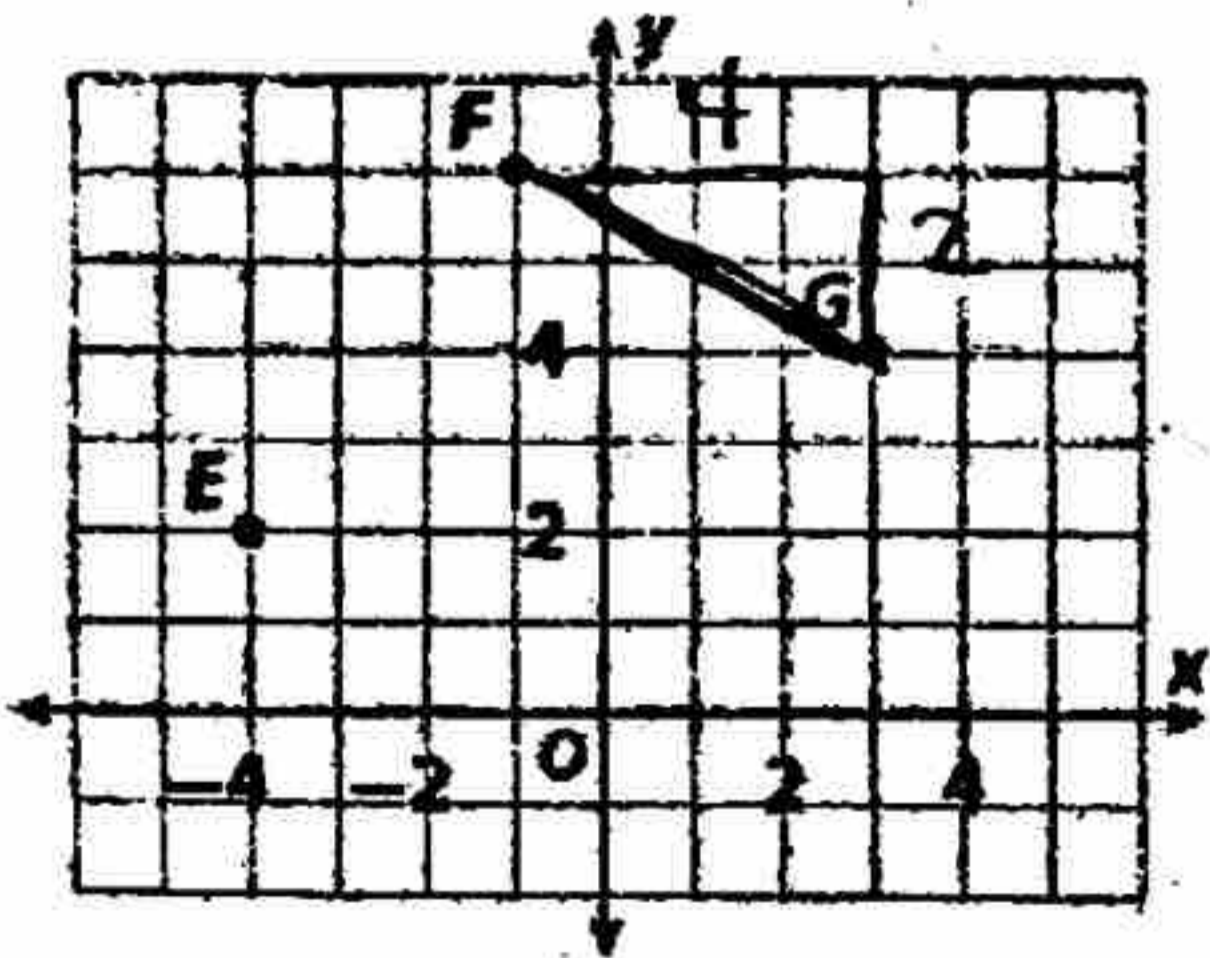
2. Which relation does not represent a function? *Same input value has different output = not a function.*

- (A) (0, 8), (3, 8), (1, 6)
- (B) (4, 2), (6, 1), (8, 9)
- (C) (1, 20), (2, 23), (9, 26)
- (D) (0, 3), (2, 3), (2, 0)

3. Two sides of a right triangle have lengths of 72 cm and 97 cm. The third side is not the hypotenuse. How long is the third side?

- (A) 25 cm
- (B) 45 cm
- (C) 65 cm
- (D) 121 cm

4. To the nearest tenth, what is the distance between point F and point G?

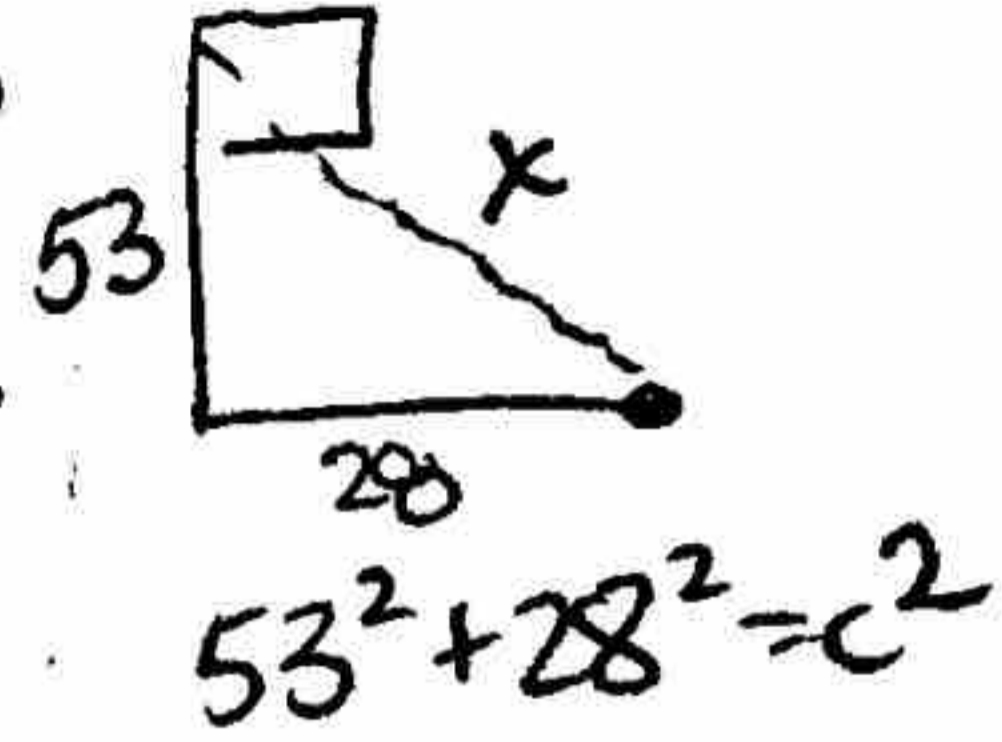


- (A) 4.5 units
- (B) 5.0 units
- (C) 7.3 units
- (D) 20 units

$97 = c$   
 $72 = a$   
 $b = ?$

$2^2 + 4^2 = c^2$   
 $4 + 16 = c^2$   
 $20 = c^2$   
 $4.5 = c$

5. A flagpole is 53 feet tall. A rope is tied to the top of the flagpole and secured to the ground 28 feet from the base of the flagpole. What is the length of the rope?



- (A) 25 feet
- (B) 45 feet
- (C) 53 feet
- (D) 60 feet

6. Which set of lengths are not the side lengths of a right triangle?  $= a^2 + b^2 = c^2$  in order to be a right triangle.

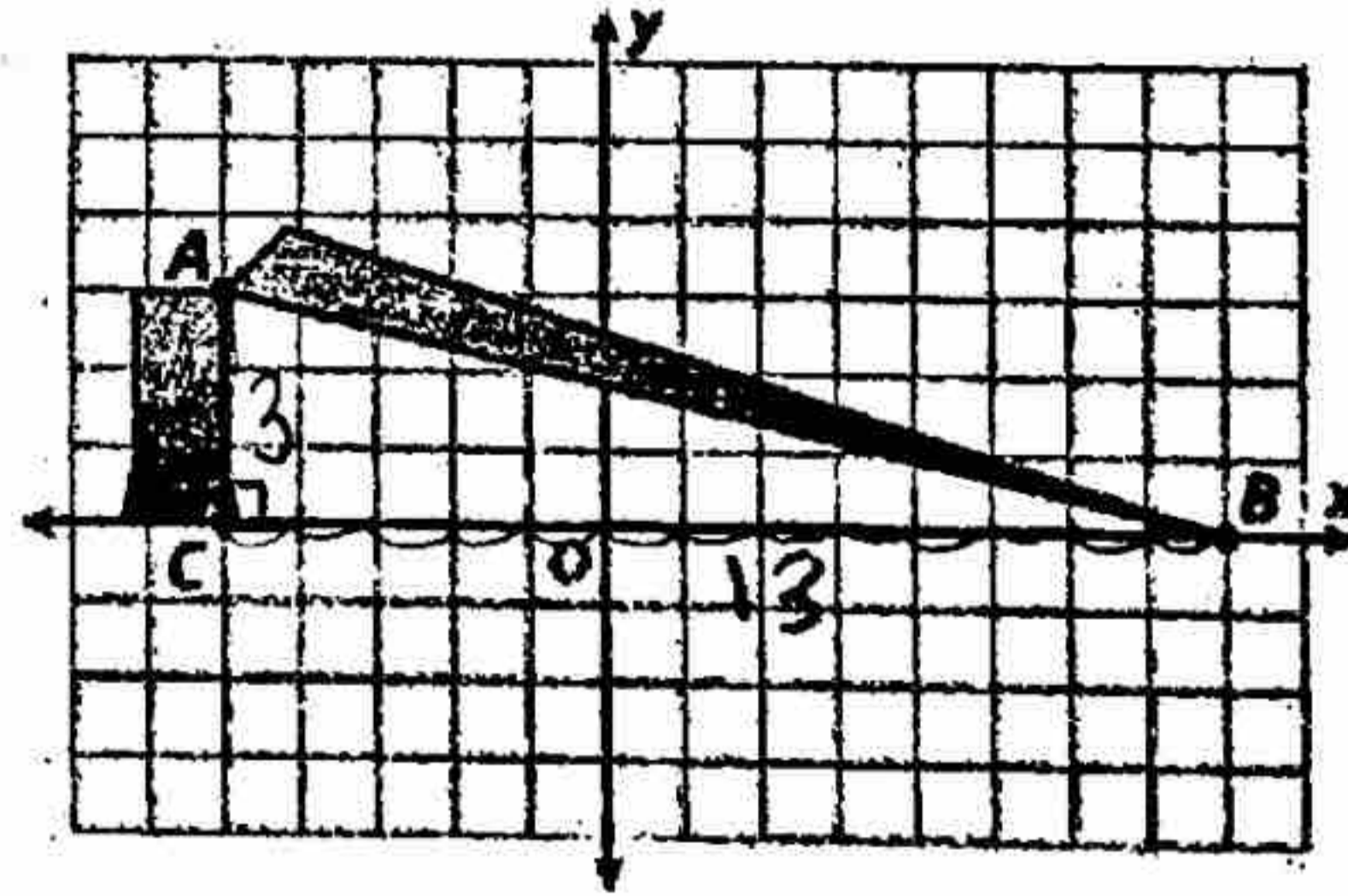
- (A) 36, 77, 85
- (B) 20, 99, 101
- (C) 27, 120, 123
- (D) 24, 33, 42

7. A triangle has one right angle. What could the measures of the other two angles be?  $\Rightarrow$  adds to  $180^\circ$

- (A) 25° and 65°
- (B) 30° and 15°
- (C) 55° and 125°
- (D) 90° and 100°

**Mini-Task**

8. A fallen tree is shown on the coordinate grid below. Each unit represents 1 meter.



$13^2 + 3^2 = c^2$   
 $178 = c^2$   
 $13.3 = c$

- a. What is the distance from A to B?  
13.3
- b. What was the height of the tree before it fell?

$3 + 13.3 = 16.3$