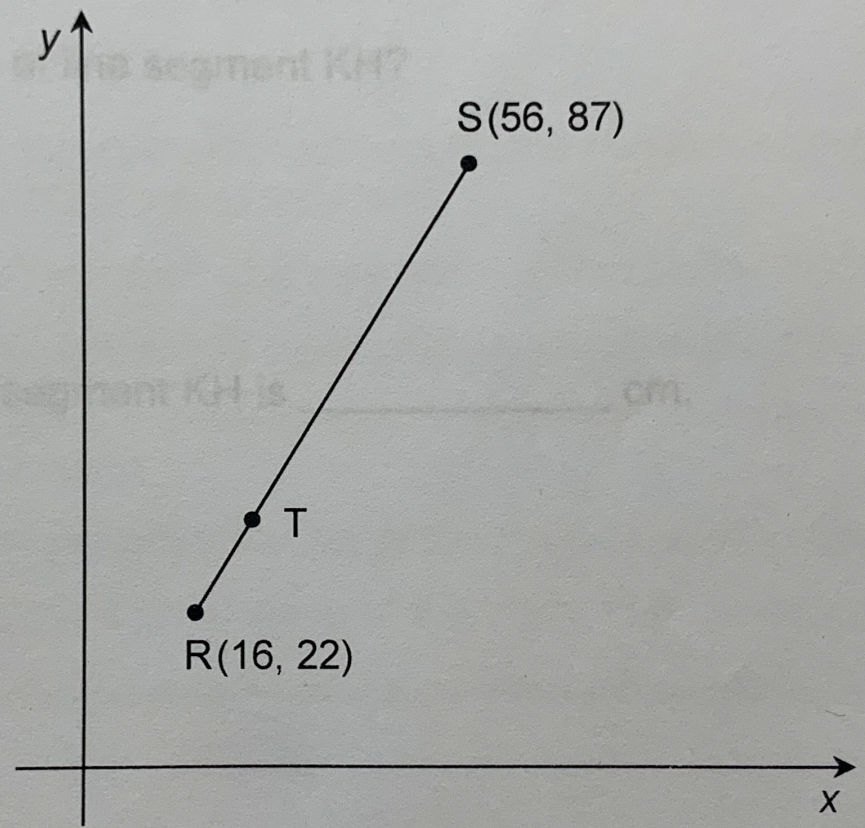

Lines and Triangles

10. The equation of line PS in the Cartesian plane is $y = -\frac{3}{4}x + 18$.

The x-coordinate of point S is 12.

What is the y-coordinate of point S?

7. Point T is on line segment RS represented below in the Cartesian plane.



Starting from point R, point T is located $\frac{1}{5}$ of the way along line segment RS.

What are the coordinates of point T?

Coordinate of C = $(x_1 + (1/5) * (x_2 - x_1), y_1 + (1/5) * (y_2 - y_1))$

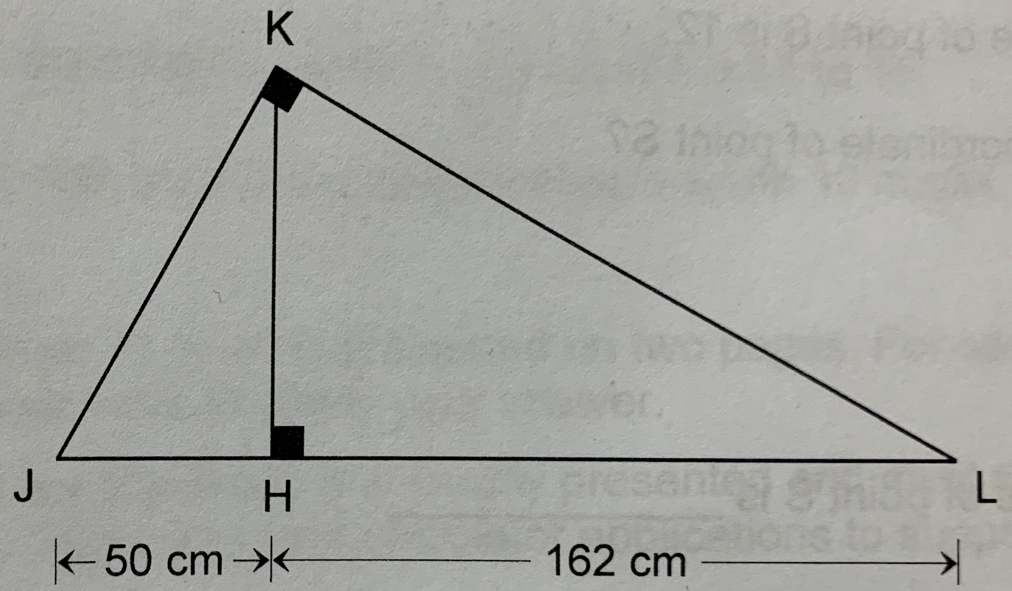
Coordinate: $X_1 + 1/5\,(X_2 - X_1)\,,\ Y_1 + 1/5\,(Y_2 - Y_1)$,

Distance from source

Distance from source

Law of similar triangles

9. Consider right triangle JKL represented below.



Line segment KH is an altitude of triangle JKL.

What is the length of line segment KH?

1

$$\frac{50}{X} = \frac{X}{162}$$

2

$$X^2 = 162 * 50$$

3

$$\sqrt{X^2 = 8100}$$

4

$$X = 90$$

Find missing coordinate

Y =-14X +10

X = 2

Y = 2/3X +12

X = 6

Y= 25X - 5

X = 10

Y= -1/5X - 15

X = 10

-Y = 12X -24

X = 4

-Y = 1/10X -22

X = 100

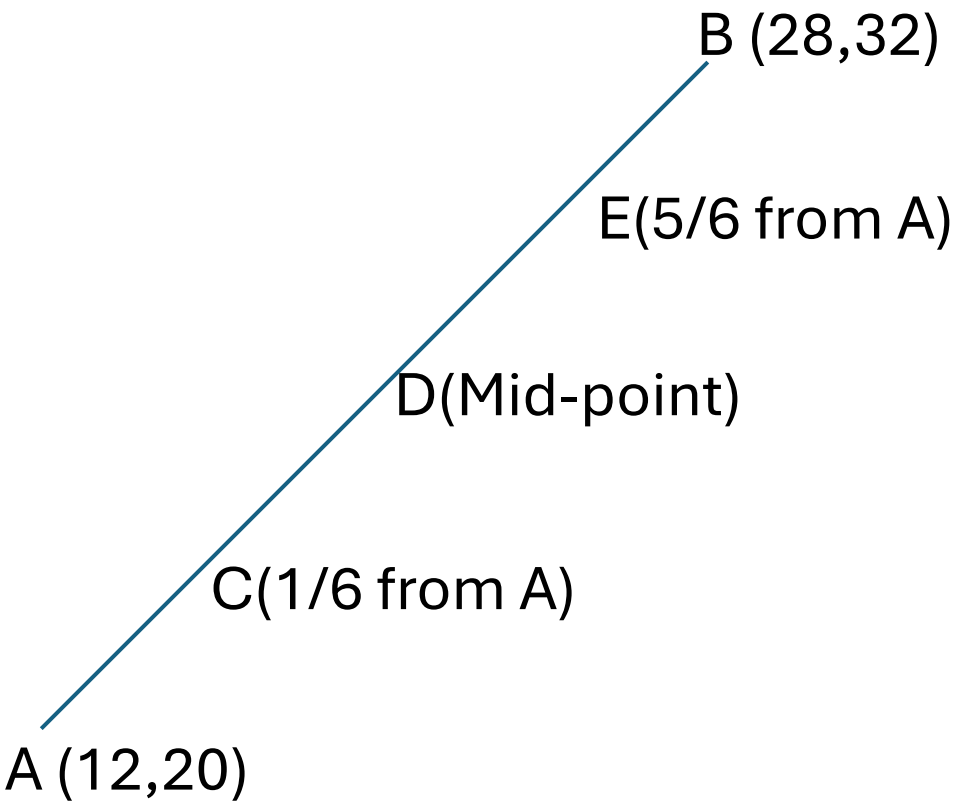
3- Find the missing coordinates

Y= 2/6 X – 10
X = 6
Y=

Y= -2/3 X + 17
X = 12
Y=

-Y = 4X + 20
X= 6
Y=

4-



Coordinates for

C:

D:

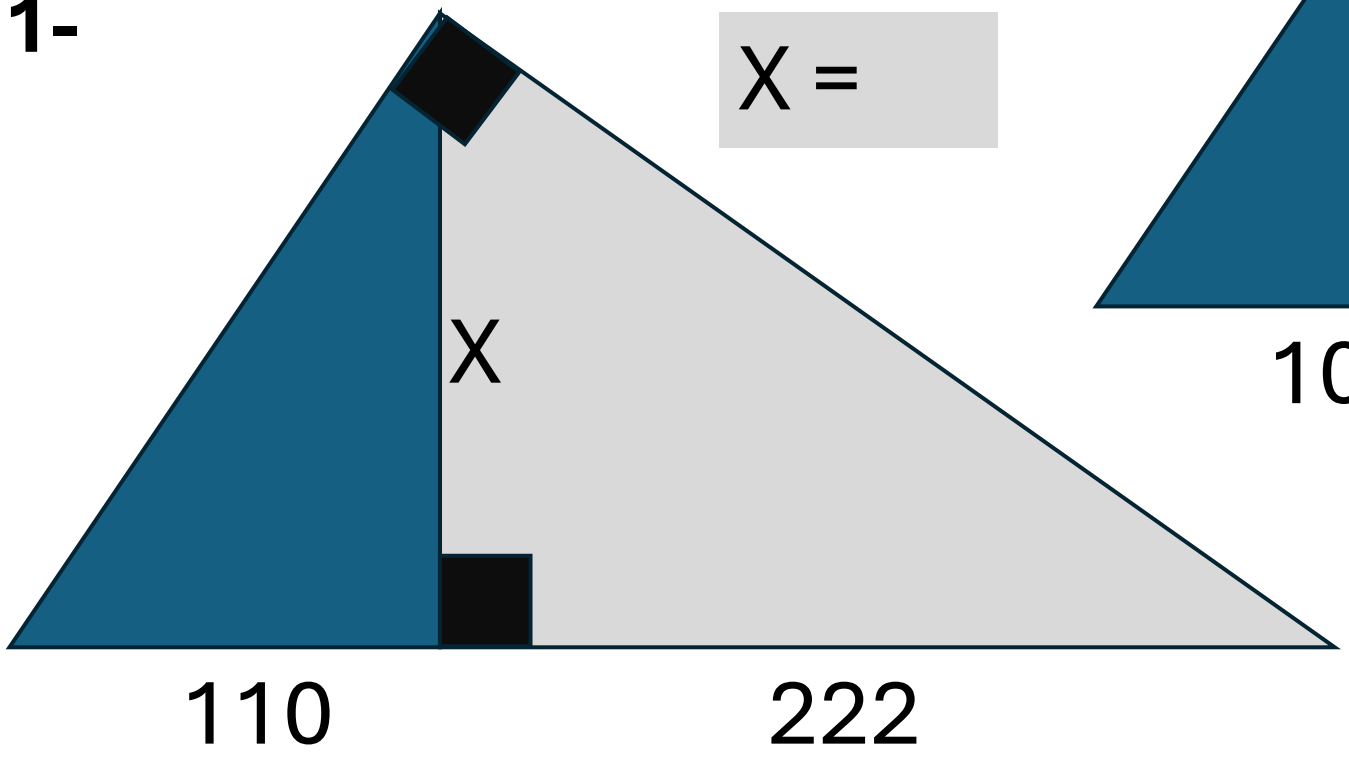
E:

Slope of line AB: _____

Distance from C to D _____

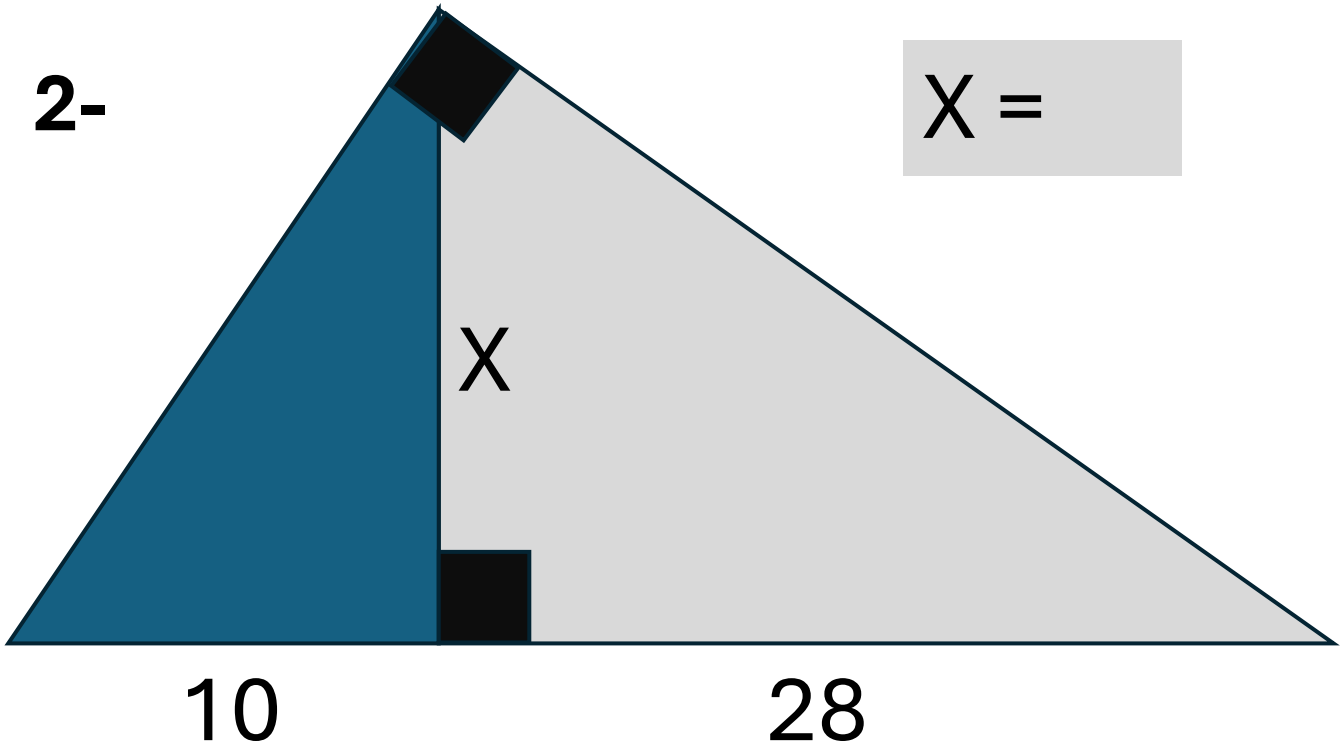
Find the length of the altitude line Who you is _____

1-



X =

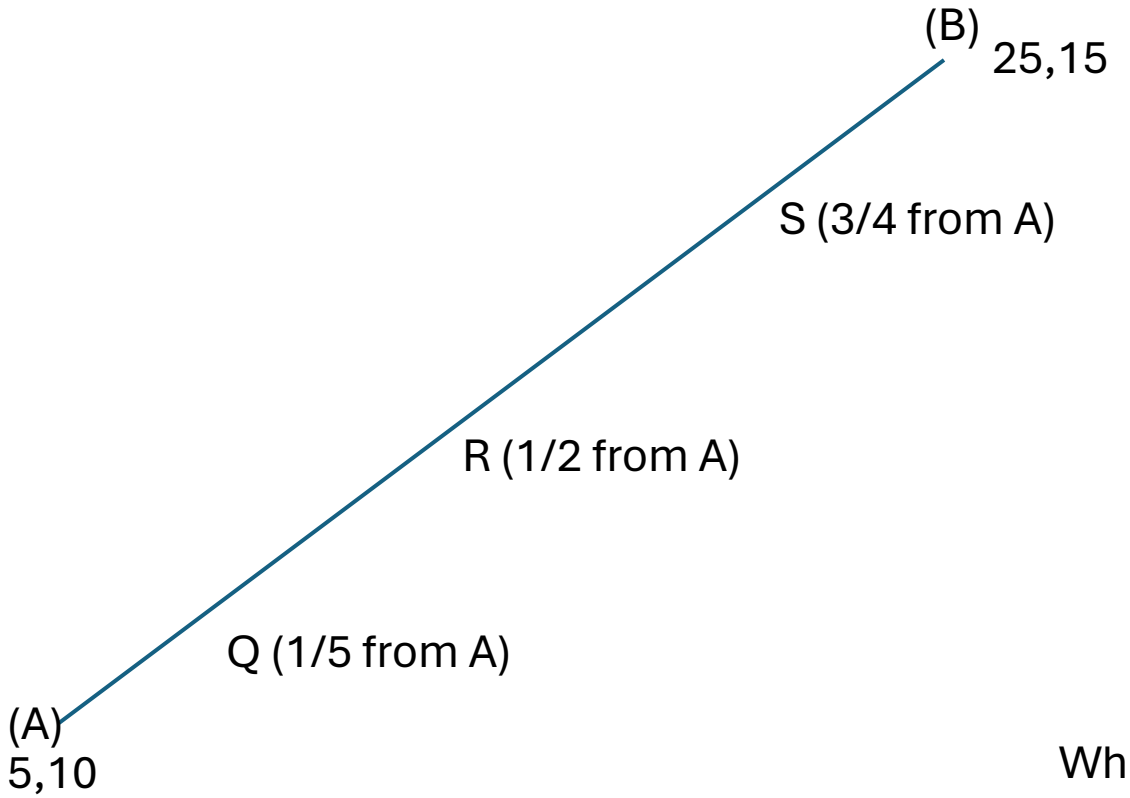
2-



X =

Bonus: What are the two questions MacGyver asks when confronted with a problem?

Find the coordinates



Q _____

R _____

S _____

What is the distance from A to B? _____

What is the slope of the line? _____

What is the distance from Q to R? _____

$$\text{slope} = \frac{y_2 - y_1}{x_2 - x_1}$$