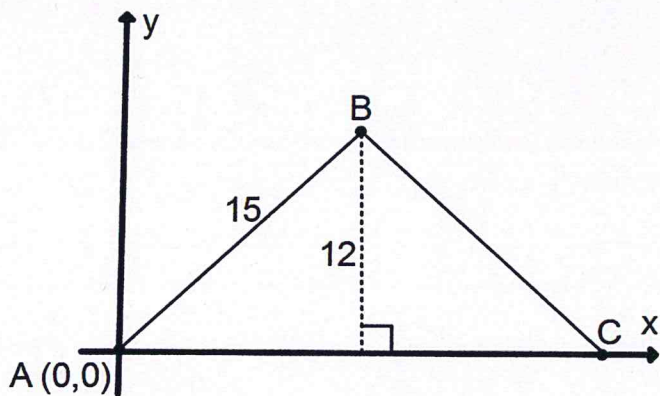


1. Solve each problem. Round to the nearest hundredth.

a)  $5^x - 11 = 83$

b)  $3(7)^x + 1 = 46$

2. You invest \$20,000 in an account that pays 5.2% interest. Find the number of years it will take for the investment to reach a value of \$50,000. Round to the nearest hundredth.



3. In the figure above, side  $\overline{AB}$  of  $\triangle ABC$  contains which of the following points?

- A) (3,2)   B) (3,5)   C) (4,6)   D) (4,10)   E) (6,8)

1. Solve each problem. Round to the nearest hundredth.

a)  $5^x - 11 = 83$   
 $+11 +11$

b)  $3(7)^x + 1 = 46$   
 $-1 -1$

$$5^x = 94$$

$$x = \log_5 94 = 2.82$$

$$\frac{3(7)^x}{3} = \frac{45}{3}$$

$$7^x = 15$$

$$\log_7 15 = x$$

$$x = 1.39$$

2. You invest \$20,000 in an account that pays 5.2% interest. Find the number of years it will take for the investment to reach a value of \$50,000. Round to the nearest hundredth.

$$100 + 5.2 = 105.2\%$$

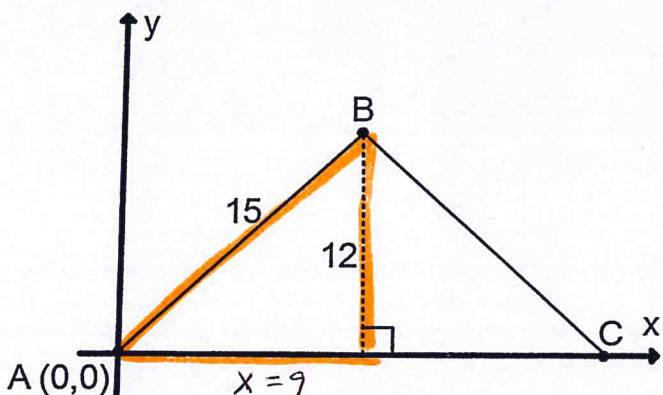
$$b = 1.052$$

$$\frac{50,000}{20,000} = \frac{20,000}{20,000} (1.052)^x$$

$$2.5 = 1.052^x$$

$$\log_{1.052} 2.5 = x$$

$$x = 18.08 \text{ yrs}$$



$$x^2 + 12^2 = 15^2$$

$$x^2 + 144 = 225$$

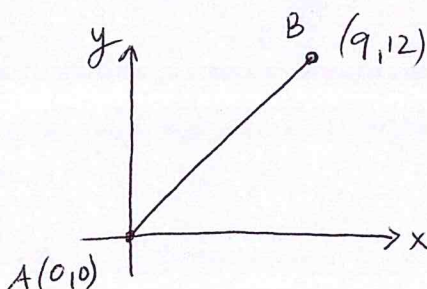
$$-144 -144$$

$$x^2 = 81$$

$$x = 9$$

3. In the figure above, side  $\overline{AB}$  of  $\triangle ABC$  contains which of the following points?

- A) (3,2) B) (3,5) C) (4,6) D) (4,10) E) (6,8)



$$m = \frac{12-0}{9-0} = \frac{12}{9} = \frac{4}{3}$$

Eq of  $\overline{AB}$  :

$$y = \frac{4}{3}x$$

(6,8) is the only pt that makes this eq true.