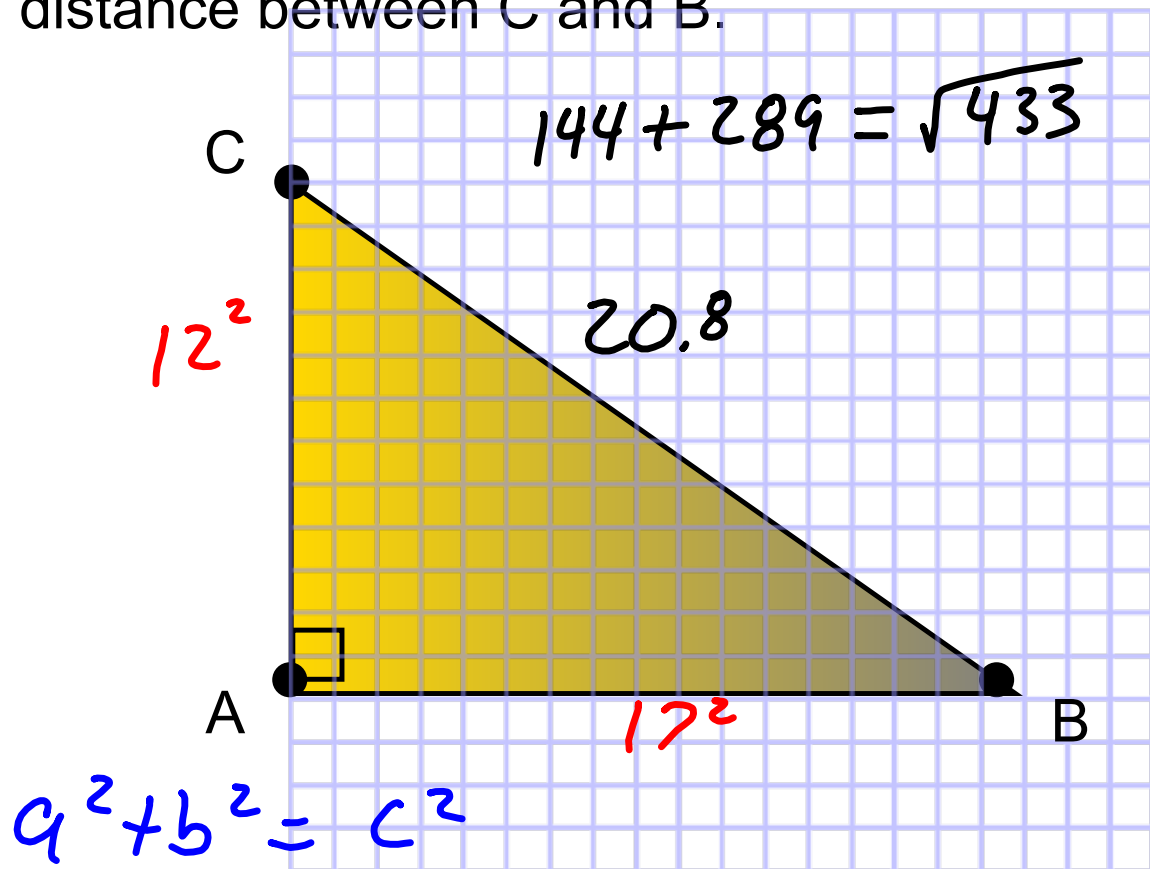


10-4 Distance Formula

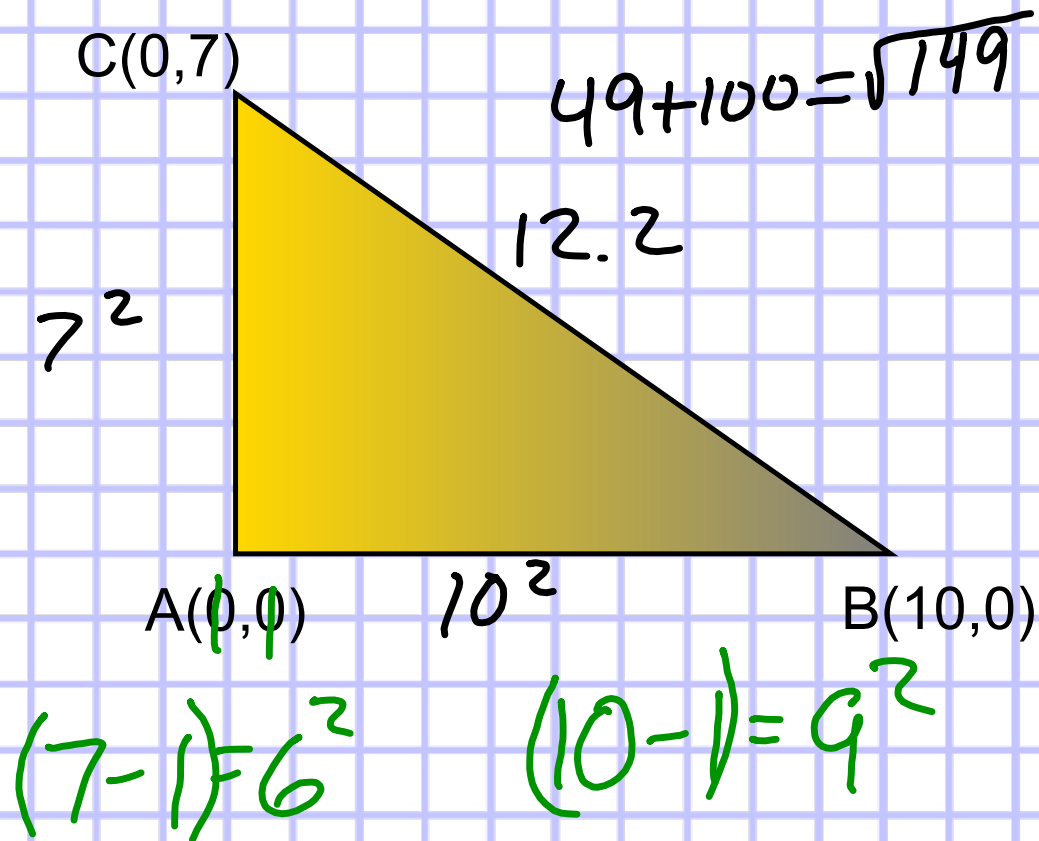
I can use the Distance Formula to find the distance between two points.

I can classify a triangle based on its side lengths.

Using the Pythagorean Theorem to find the distance between C and B.



Find the distance between points B and C

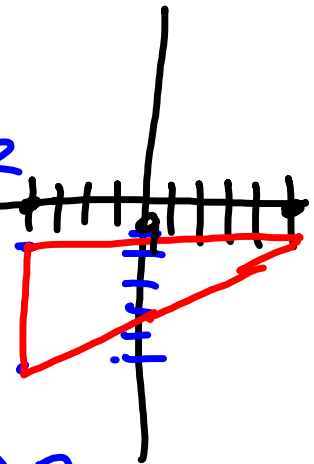


$$\text{Distance} = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

Find the distance between the two given points:

a. $C(-4, -6)$ and $D(5, -1)$

$$\begin{aligned} & \sqrt{(5 - (-4))^2 + (-1 - (-6))^2} \\ &= \sqrt{(9)^2 + (5)^2} \\ & \sqrt{81 + 25} = \sqrt{106} = 10.2 \end{aligned}$$



$$\text{Distance} = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

Find the distance between the two given points:

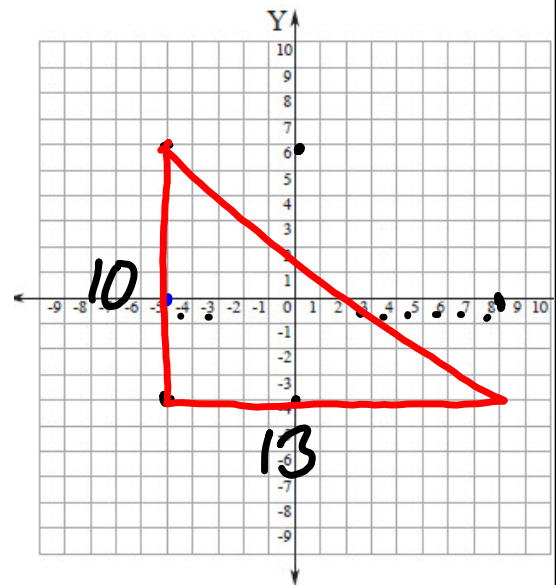
b. E(-5,6) and F(8,-4)

$$\sqrt{(-5 - 8)^2 + (6 - (-4))}$$

$$\sqrt{(-13)^2 + (10)^2}$$

$$\sqrt{169 + 100} = \sqrt{269}$$

16.4



Find the distance between (4,3) and (1,7)

$$\begin{aligned} & \sqrt{(1-4)^2 + (7-3)^2} \\ & \sqrt{3^2 + 4^2} \\ & \sqrt{9+16} \\ & \sqrt{25} \end{aligned} \quad \textcircled{5}$$

Find the distance between the two points

a. $A(0,3)$ and $B(4,-4)$

Find the distance between the two points

b. $C(-6,-4)$ and $D(-1,5)$

Find the perimeter of the following triangle

