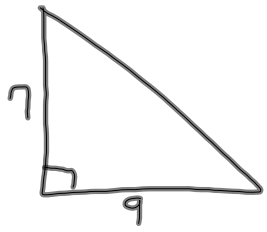
9-5-13

1st Geo

Pythagorean Theorem Continued



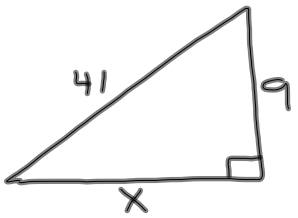
$a^2+b^2=c^2$

$7^2+9^2=c^2$

$49+81=c^2$

$\sqrt{130}=\sqrt{c^2}$

$11.4 \approx c$



$a^2+b^2=c^2$

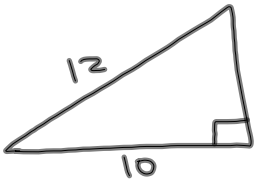
$a^2+9^2=41^2$

$a^2+81=1681$

$-81 \quad -81$

$\sqrt{a^2}=\sqrt{1600}$

$a=40$



$a^2+b^2=c^2$

$10^2+b^2=12^2$

$100+b^2=144$

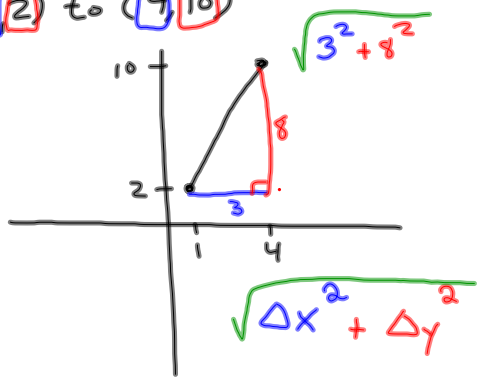
$-100 \quad -100$

$\sqrt{b^2}=\sqrt{44}$

$b \approx 6.6$

Find the distance from

(1,2) to (4,10)



Find the distance from

(2,10) to (4,15).

$$\text{Distance} = \sqrt{\Delta x^2 + \Delta y^2}$$

$$= \sqrt{2^2 + 5^2}$$

$$= \sqrt{4 + 25}$$

$$= \sqrt{29}$$

$$\approx 5.4$$

Find the distance between

(2,3) and (0,7)

$$D = \sqrt{\Delta x^2 + \Delta y^2}$$

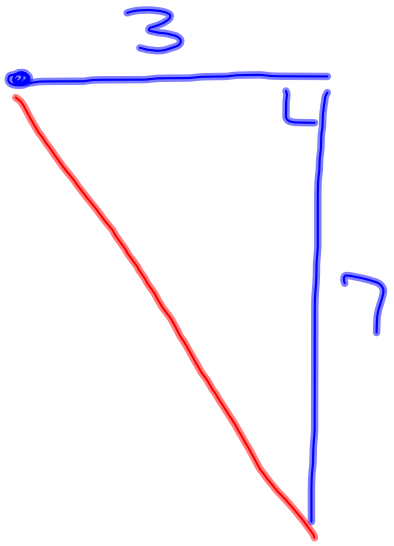
$$= \sqrt{2^2 + 4^2}$$

$$\sqrt{4+16}$$

$$\sqrt{20}$$

$$\approx 4.5$$

If you walk 3 miles due East and 7 miles due South, how far from the start are you?



$a^2+b^2=c^2$

$3^2+7^2=c^2$

$9+49=c^2$

$\sqrt{58}=\sqrt{c^2}$

$7.6\approx c$