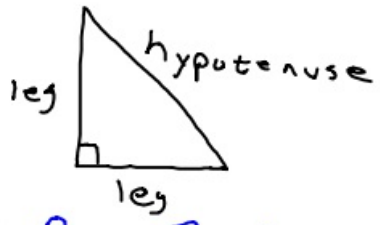
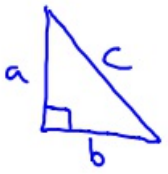
8-22-18 5th Geo

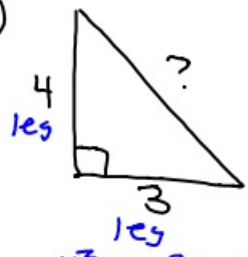


$leg^2 + leg^2 = hypotenuse^2$

Pythagorean Theorem



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

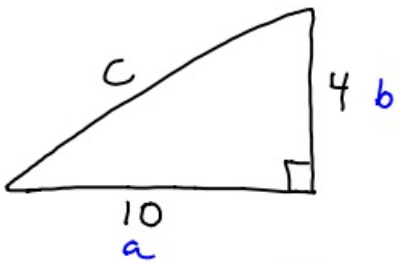
① 

$4^2 + 3^2 = c^2$

$16 + 9 = c^2$

$\sqrt{25} = \sqrt{c^2}$

$5 = c$

② 

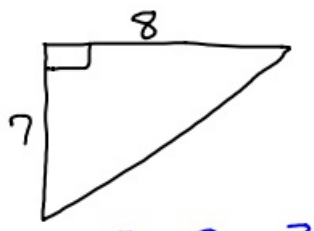
$10^2 + 4^2 = c^2$

$100 + 16 = c^2$

$\sqrt{116} = \sqrt{c^2}$

$c \approx 10.8$

③



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

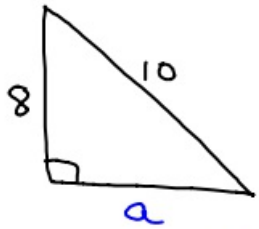
$7^2+8^2=c^2$

$49+64=c^2$

$\sqrt{113}=\sqrt{c^2}$

$c \approx 10.6$

④



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

$a^2+8^2=10^2$

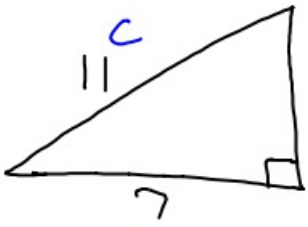
$a^2+64=100$

$-64 \quad -64$

$a^2=36$

$a=6$

⑤



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

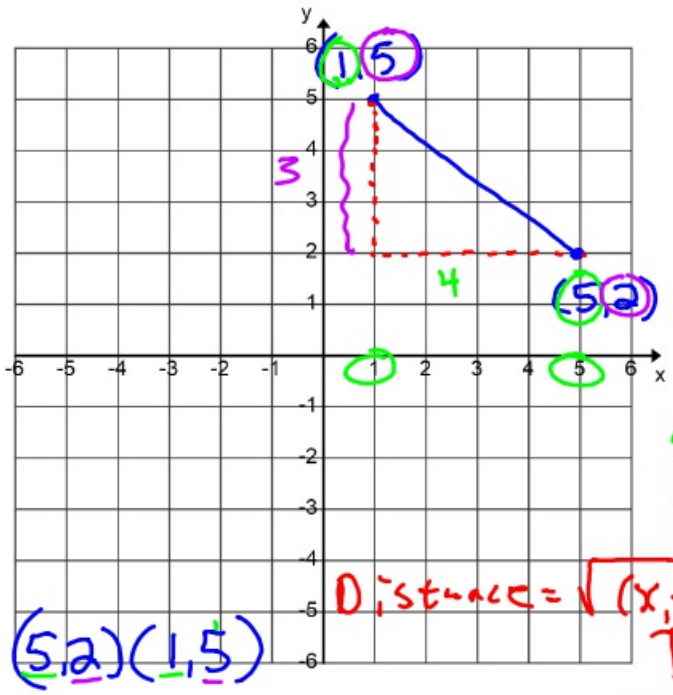
$a^2+7^2=11^2$

$a^2+49=121$

$-49 \quad -49$

$\sqrt{a^2}=\sqrt{72}$

$a \approx 8.5$



$5-1=4$

$5-2=3$

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

horizontal leg length

vertical leg length

$(5,2)(1,5)$

$D=\sqrt{(5-1)^2+(2-5)^2}$

$=\sqrt{25}$

$=5$

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

⑥ What is the distance from $(2,6)$ to $(4,3)$?

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

$=\sqrt{2^2+3^2}$

$=\sqrt{4+9}$

$=\sqrt{13}$

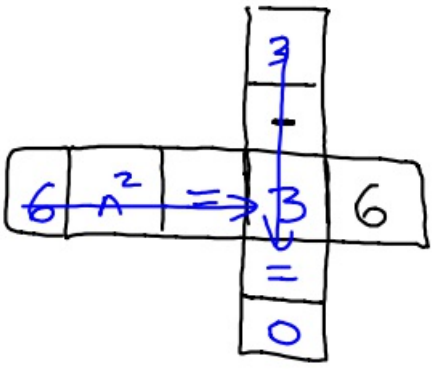
≈ 3.6

(7) What is the distance from $(2,8)$ to $(5,3)$?

$$D = \sqrt{\Delta x^2 + \Delta y^2}$$
$$= \sqrt{3^2 + 5^2}$$
$$= \sqrt{9+25}$$
$$= \sqrt{34}$$
$$\approx 5.8$$

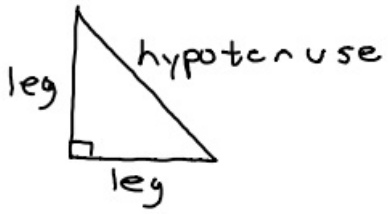
(8) Find distance from $(-2,3)$ to $(3,9)$.

$$D = \sqrt{\Delta x^2 + \Delta y^2}$$
$$= \sqrt{5^2 + 6^2}$$
$$= \sqrt{25+36}$$
$$= \sqrt{61}$$
$$\approx 7.8$$



~~3~~ 3 ~~6~~ 0 ~~x²~~ ≠ ≠

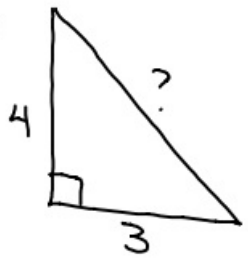
8-22-18 6th Geo



$leg^2 + leg^2 = hypotenuse^2$

Pythagorean Theorem

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

① 

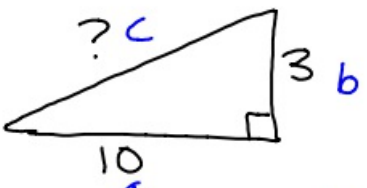
$leg^2 + leg^2 = hyp^2$

$3^2 + 4^2 = hyp^2$

$9 + 16 = hyp^2$

$\sqrt{25} = \sqrt{hyp^2}$

$5 = hyp$

② 

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

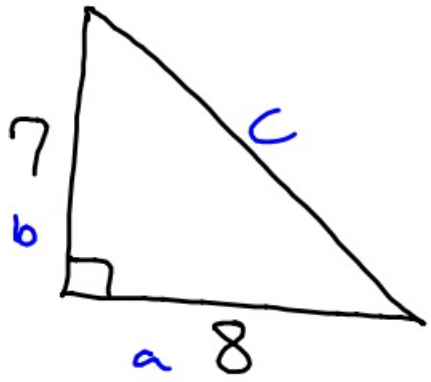
$10^2 + 3^2 = c^2$

$100 + 9 = c^2$

$\sqrt{109} = \sqrt{c^2}$

$c \approx 10.4$

(3)



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

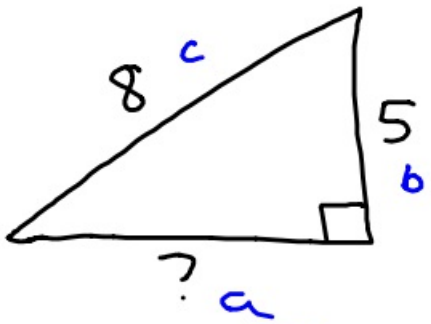
$8^2 + 7^2 = c^2$

$64 + 49 = c^2$

$\sqrt{113} = \sqrt{c^2}$

$c \approx 10.6$

(4)



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

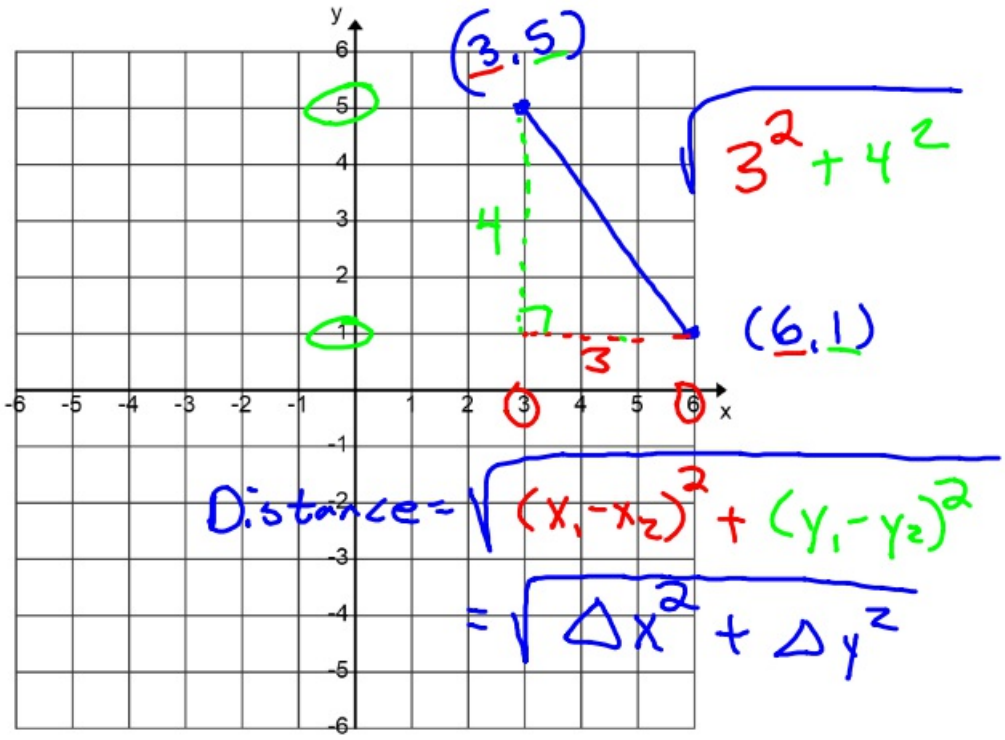
$a^2 + 5^2 = 8^2$

$a^2 + 25 = 64$

$-25 \quad -25$

$\sqrt{a^2} = \sqrt{39}$

$a \approx 6.2$



(5) Find the distance from $(2,8)$ to $(5,16)$.

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

$$= \sqrt{3^2+8^2}$$

$$= \sqrt{9+64}$$

$$= \sqrt{73}$$

$$\approx 8.5$$

⑥ Find the distance from $(1,8)$ to $(3,2)$.

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

$$= \sqrt{2^2 + 6^2}$$

$$= \sqrt{40}$$

$$\approx 6.3$$

⑦ Find the distance from $(-3,2)$ to $(1,7)$.

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

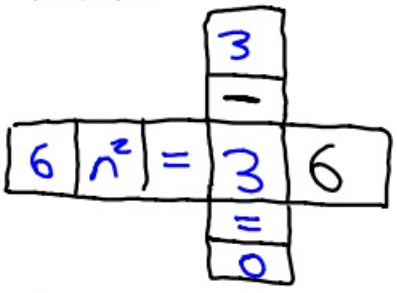
$$= \sqrt{4^2 + 5^2}$$

$$= \sqrt{16 + 25}$$

$$= \sqrt{41}$$

$$\approx 6.4$$

MABBLE



3 ~~3~~ ~~6~~ 0 ~~n²~~ ≠ ≠