## Warmup 3/(\# of days so far in 2020) - 60

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## ***Make sure you have a calculator***

For each system, explain what your FIRST STEP would be to solve it. You do not have to actually solve any of the systems.

1) $\left\{\begin{array}{l}4 x-3 y=15 \\ 7 x+6 y=-4\end{array}\right.$
2) $\left\{\begin{array}{c}y=5 x+1 \\ 3 x+2 y=28\end{array}\right.$
3) $\left\{\begin{array}{l}2 x+4 y=18 \\ 5 x-3 y=11\end{array}\right.$
4) $\left\{\begin{array}{c}y=4 x+6 \\ y=-3 x+27\end{array}\right.$
5) $\left\{\begin{array}{c}y=\frac{4}{3} x-2 \\ y=-\frac{1}{4} x+5\end{array}\right.$
6) (challenge) $\left\{\begin{array}{c}x+y=10 \\ 3 x=9 y+12\end{array}\right.$

## One more (don't need to write)

- Which of these is a reasonable estimate for the third side?
A. 19

B. 30
C. 49
D. 62


## Hats \& Hoods...

- No more warnings


## Going over the quiz

- Retake deadline: End of 9 weeks


## Going over the HW

## Let's look at...

- Some real world situations that use the Pythagorean Theorem (there are several!)


## Application: TV's

- Carly bought a 32 inch TV.

- However, when she measured the length, she found that it was only 28 inches.
-What's the deal???


## Application: TV's

- TV's are actually measured by the length of their diagonal.
- If Carly's 32-inch TV was only 28 inches long, how tall was it?

$$
\approx 15.5 \mathrm{in}
$$

- Steven also bought a 32-inch TV, but his was only 25.6 inches long. How tall was his?
19.2 in
- Whose TV has a greater AREA?

Carly: $\approx 433.8$ in $^{2}$
Steven: $=491.52$ in² $^{2}$


TOTAL AREA $25.6 \times 19.2=491.52$ square inches


TOTAL AREA $28 \times 15.7=439.6$ square inches

## CHALLENGE: Pythagorean Triples

- There are some well-known sets of three whole numbers that can form the sides of a right triangle.
- First person/pair to figure them all out will win!


## Homework:

## "Measuring Your TV" Sheet

- Go home and find out what size TV you have. Hopefully, your parents will remember, or you can find the box or something.
- Measure the length and width of the TV, then check the math to see if you get the right diagonal length.

