

## CODE RED – DO NOW

Complete Problems #1-4

1. Find the length of  $\overline{AB}$ .

$$\sqrt{58} \approx 7.6$$

2. Find the midpoint  $\overline{AB}$ .

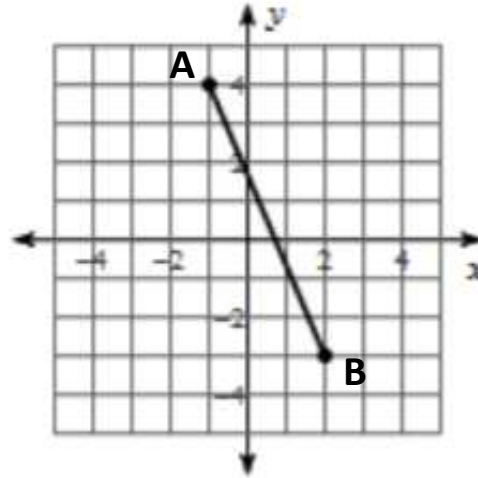
$$(0.5, 0.5)$$

3. If B is the midpoint of  $\overline{AC}$ , then where is point C?

$$(5, -10)$$

4. What is the slope of  $\overline{AB}$ ?

$$\frac{-7}{3}$$



## Pythagorean Theorem Pt. 2

SOL G.

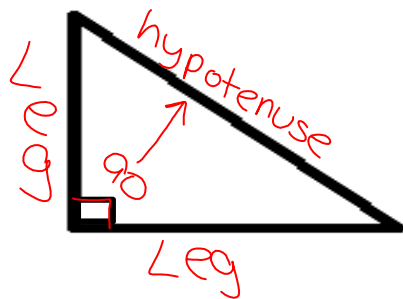
## Today's Agenda

- ✓ DO NOW
- ✓ Pythagorean Theorem vs. Distance Formula
- ✓ PT in Squares
- ✓ Silent Bingo!
- ✓ Exit Ticket

## CODE YELLOW

### Vocabulary

**Right Triangle** – A triangle with one right angle



**Hypotenuse**  
the longest side  
of a right triangle

**The Pythagorean Theorem**

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

## CODE YELLOW

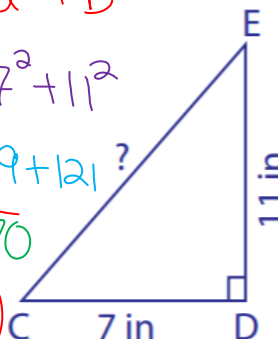
Solving for missing sides:

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

$$x^2 = 7^2 + 11^2$$

$$x^2 = 49 + 121$$

$$x^2 = 170$$

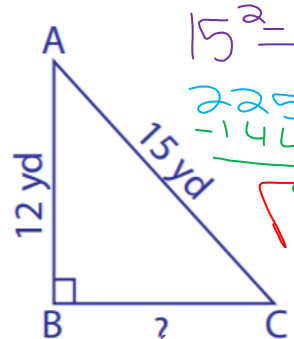
$$x = 13$$


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

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

$$225 = 144 + x^2$$

$$\begin{array}{r} 225 \\ -144 \\ \hline 81 = x^2 \end{array}$$

$$x = 9$$


## CODE YELLOW

Which of the following sets of numbers could be the side lengths of a right triangle?

1) **33, 44, 55**

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

$$55^2 = 44^2 + 33^2$$

$$3025 = 1936 + 1089$$

$$3025 = 3025$$

2) **18, 24, 39**

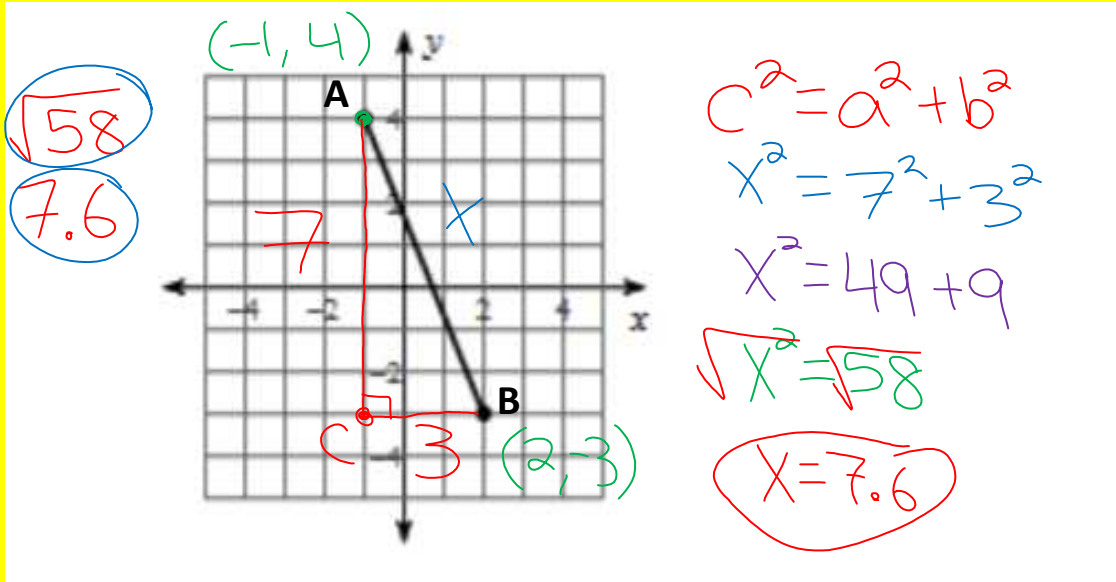
$$c^2 = a^2 + b^2$$

$$39^2 = 18^2 + 24^2$$

$$1521 = 324 + 576$$

$$1521 > 900$$

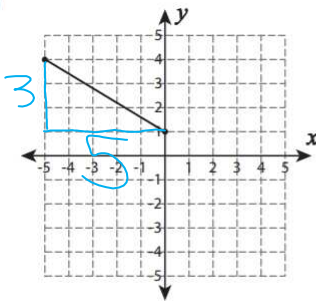
## CODE YELLOW



## CODE GREEN

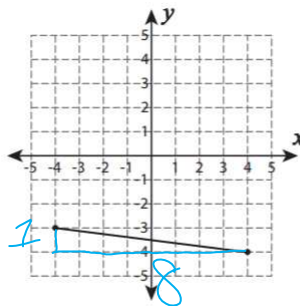
Find the distance between each set of points.

1)



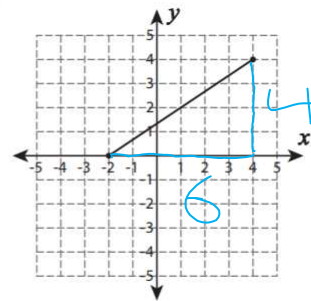
$$\sqrt{34} = 5.8$$

2)



$$\sqrt{64} = 8.0$$

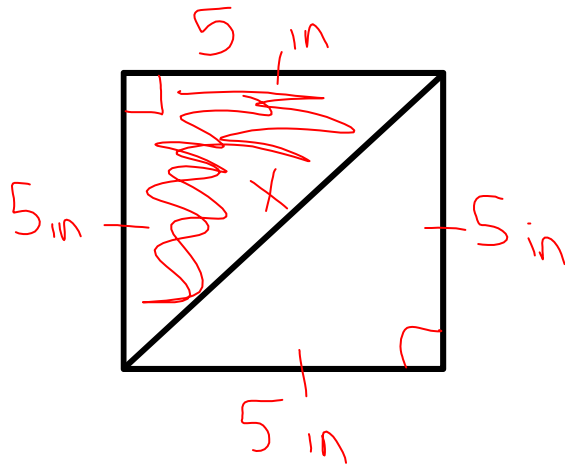
3)



$$\sqrt{52} = 7.2$$

## CODE YELLOW

### Pythagorean Theorem in Squares



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

$$c^2 = 5^2 + 5^2$$

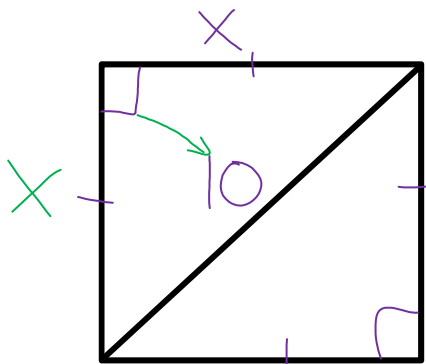
$$c^2 = 25 + 25$$

$$c^2 = 50$$

$$c = 7.0$$

## CODE YELLOW

### Pythagorean Theorem in Squares



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

$$10^2 = x^2 + x^2$$

$$100 = 2x^2$$

$$\frac{100}{2} = \frac{2x^2}{2}$$

$$50 = x^2$$

$$7.0 = x$$

CODE BLUE

# Silent



Winners Choice!

