## Created by Anish Krishnan

Warmup $3 /\left(e^{i \pi}+8\right)$
1)Find the area of this triangle:

***IF YOU WERE GONE YESTERDAY, GET A NOTES SHEET FROM MY DESK. ASK TO COPY SOMEONE'S NOTES!***
2) What is the distance between the points $(2,8)$ and $(11,-5)$ ? Round your answer to the nearest tenth. (Draw a picture if it helps)

## QUIZ FRIDAY

- Pythagorean Theorem
- Pythagorean Theorem Story Problems (drawing pictures \& stuff)
- Finding the distance between two points


## TRANSFORMATIONS RETAKE DEADLINE: TOMORROW!!!

- I gave out a TON of those gold extra practice worksheets. I've only had two retakes so far!!!


## p. 435 (1-4, 8, 9)

1) 3.6 units
2) 4.1 units
3) 7.2 units
4) About 5.1 miles
5) About 150 miles
6) b. Sample answer: Make a right triangle using points $B$ and $C$, then use the Pythagorean Theorem.
C. $A C \approx 3.6$ units

$$
A B=5 \text { units }
$$

$A C \approx 4.2$ units
d. 12.8 units

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

When I'm finding the distance, which letter is that?

$$
\sqrt{a^{2}+b^{2}}=c
$$

If " $a$ " is the horizontal distance and " $b$ " is the vertical distance:

$$
\sqrt{(x-x)^{2}+(y-y)^{2}}=c
$$

## Write it down on your notes page if you want...

## Distance Formula

If $\left(x_{1}, y_{1}\right)$ and $\left(x_{2}, y_{2}\right)$ are the points, then:

$$
d=\sqrt{\left(x_{2}-x_{1}\right)^{2}+\left(y_{2}-y_{1}\right)^{2}}
$$

- NOTE: If this formula confuses you, you don't have to use it (at least not this year). You can just draw the triangle and use $a^{2}+b^{2}=c^{2}$ !


## Rest of today:

- Partner Problems
- Label a piece of paper "Partner Problems" - all your work goes on this page
- Keep your work organized; label each problem
- You may also use a graphing sheet if you want.


## B

## Area of a Right Triangle

- A right triangle has one leg that measures 12 inches and a hypotenuse that measures 13 inches. What is the area of this triangle?
- Find the distance between:
$(2,10)$ and $(6,3)$
$d=\sqrt{\left(x_{2}-x_{1}\right)^{2}+\left(y_{2}-y_{1}\right)^{2}}$


## A



The circle has a radius of 8 feet. Enter an approximate side length for $x$, in feet, to the nearest tenth of a foot.
-
-

$$
\begin{aligned}
& \text { Line segment } \overline{E G} \text { is shown on a coordinate plane. } \\
& \text { DO NOT DRAW } \\
& \text { ON THIS PAPER!!! }
\end{aligned}
$$

What is the approximate length, in units, of $\overline{E G}$ ?
A 5.1

- 7.2
c. 18.4
- 26.0


## D

## Pythagorean Theorem in



Enter the length, to the nearest hundredth of an inch, of the diagonal.

## F

## More ladders!

- A 20-foot ladder is leaning against a 24 foot tall building. How far away from the building must the ladder be so that it reaches a window that is 6 feet below the top of the building? (Draw a picture!)


## H <br> Bob's Drive

- Bob drives 10 miles east, then 3 miles south, then 4 miles west. How far away from his starting point does he end up? (Draw a picture!)


## E

To the nearest tenth of a unit, what is the perimeter of a triangle with vertices at (3, 4), (2, 2), and $(0,5)$ ?
A 5.3 units

- 7.3 units
c. 8.7 units

D 9.0 units

## You should draw a picture to help you!!! (You may draw it or use a graphing sheet)

G

## Find the distance between:

 10 units, then what is the value of ()?

## HOMEWORK:

- p. $427(4,5,6)$

