

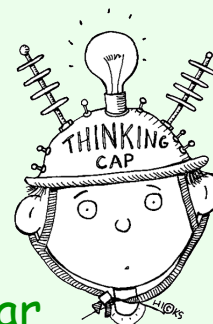
# 4.1 Vector Components

## STANDARDS

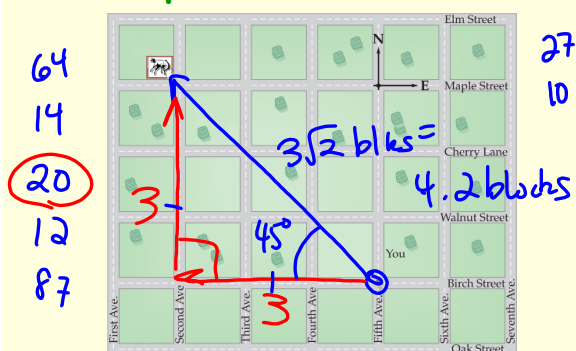
4.1 I can define a vector and represent vectors in multiple forms.



What is the difference between a scalar and a vector?

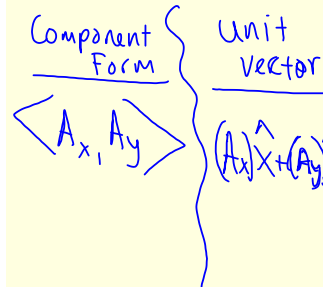
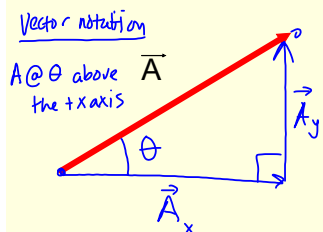


### Components of a Vector



Dist = 6 blks

### Components of a Vector



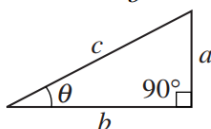
Right triangle

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

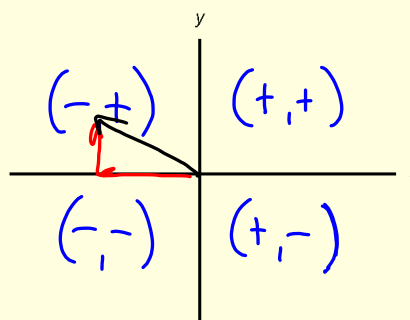
$$\sin \theta = \frac{a}{c}$$

$$\cos \theta = \frac{b}{c}$$

$$\tan \theta = \frac{a}{b}$$



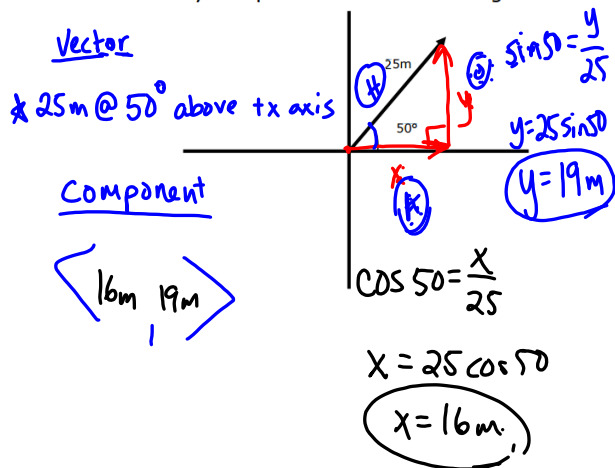
### Signs of Component Vectors



$\langle -5, 3 \rangle$

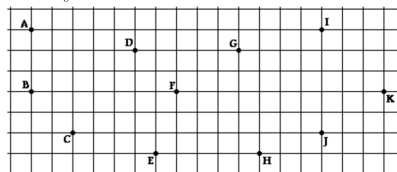
## Vector Components

Find the x and y components of the following vector.



## Vector Components

Consider the grid below with several marked locations.



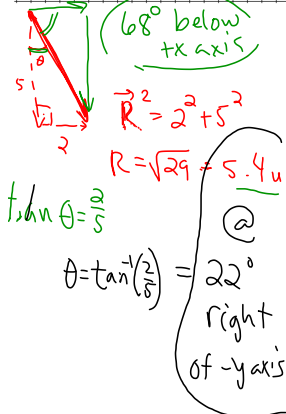
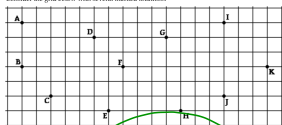
Determine the resultant displacement for a person who walks from location...

A to C: \_\_\_\_\_ J to K to F: \_\_\_\_\_

Write the answers in vector notation and in component notation.

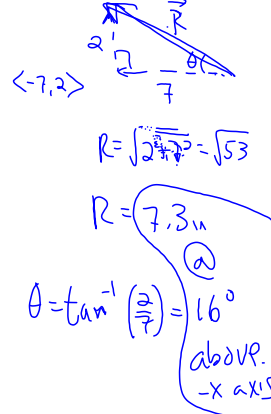
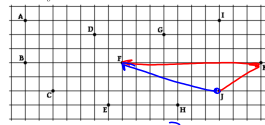
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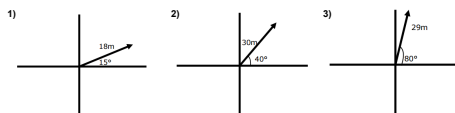


# HOMEWORK Worksheet

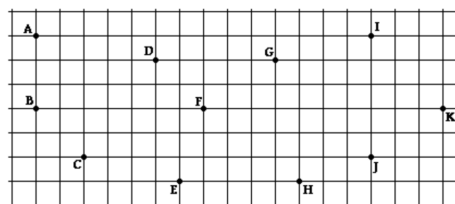
Name \_\_\_\_\_ Date \_\_\_\_\_

### Finding the Components of a Vector - Independent Practice Worksheet

Find the x and y components of each of the following vectors.



4) Consider the grid below with several marked locations.



Determine the direction of the resultant displacement for a person who walks from location ...

- a. A to C: \_\_\_\_\_ b. D to B: \_\_\_\_\_ c. G to D: \_\_\_\_\_
- d. F to A: \_\_\_\_\_ e. F to E: \_\_\_\_\_ f. C to H: \_\_\_\_\_
- g. E to K: \_\_\_\_\_ h. J to K to F: \_\_\_\_\_ i. I to K to B: \_\_\_\_\_