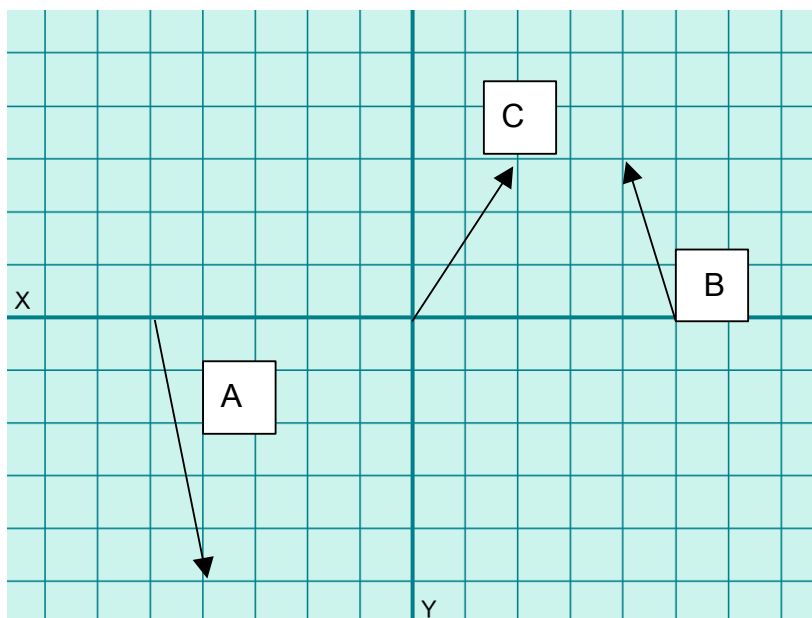


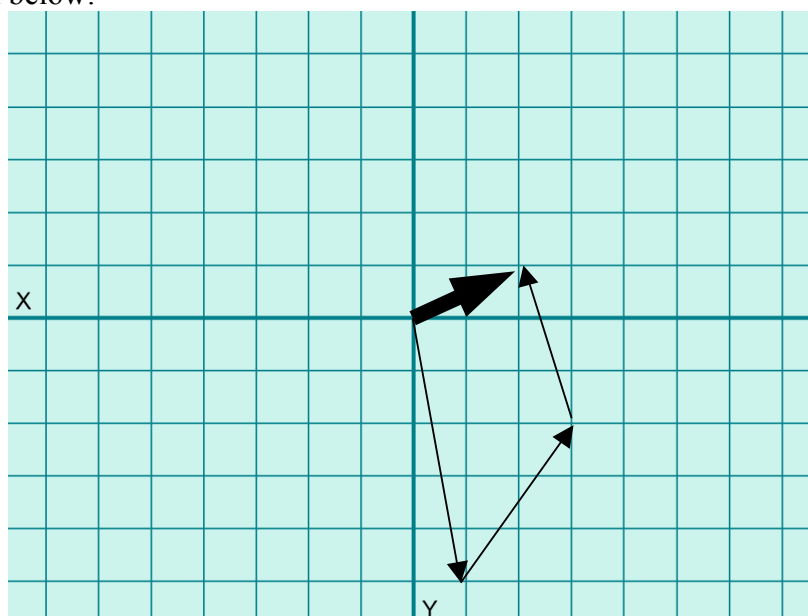
## Vector Addition Worksheet

For this activity you will be adding vectors using the head-to-tail method. Each mm will be equal to a man walking 3 m/s. Use the graphs to create a result then check this answer using right triangle trig.

If there are three vectors:

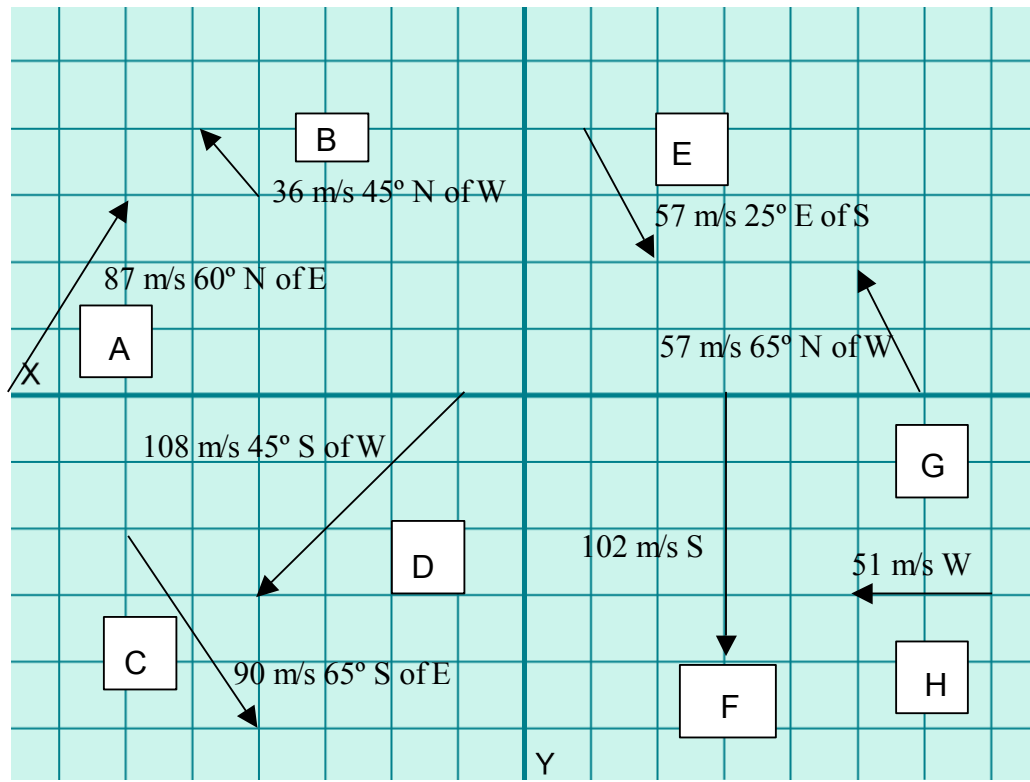


And I place the B vector on to the A vector I would see that vector B is two right and 3 up. So it would be attached to the arrow end of vector A in the same shape and direction. The same is true for vector C. It is 1 left and 3 up. It should start at the end of B and have the same magnitude (length) and direction. So the resultant would be as seen below:

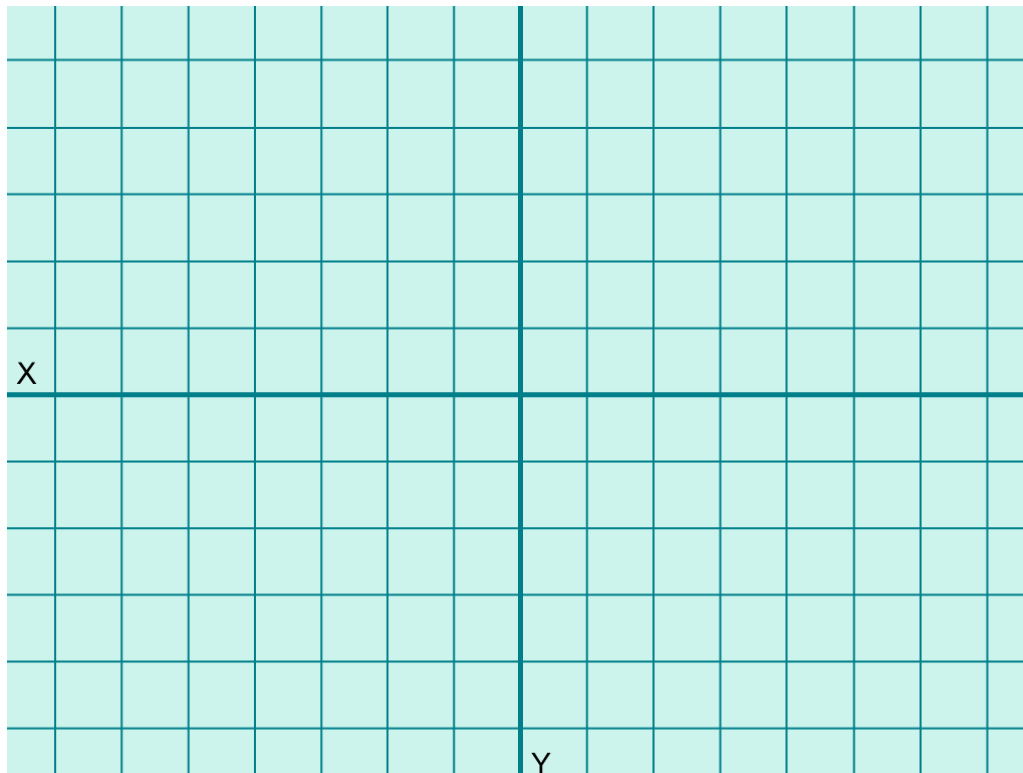


Now I can use a ruler and a protractor to find the resultant direction and magnitude.

Given the following vectors, create head to tail models and find the resultant magnitude and direction the arrows are not perfect but use the corner that they are closest to:



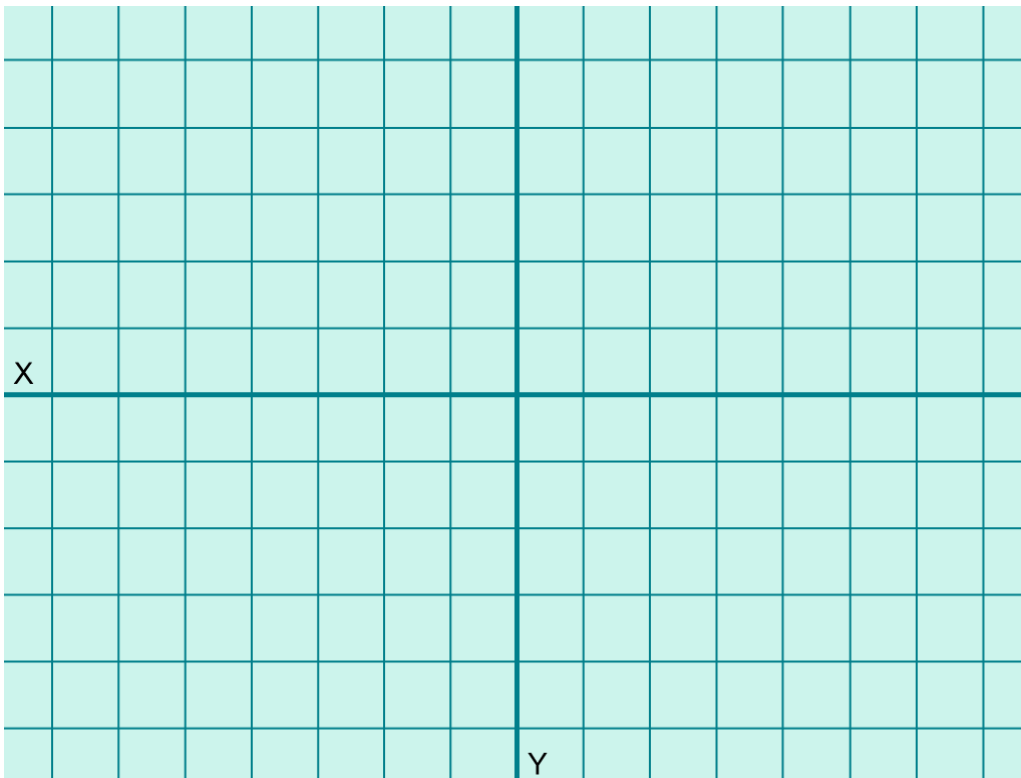
1.  $A + E + F$



Magnitude: \_\_\_\_\_

Direction: \_\_\_\_\_

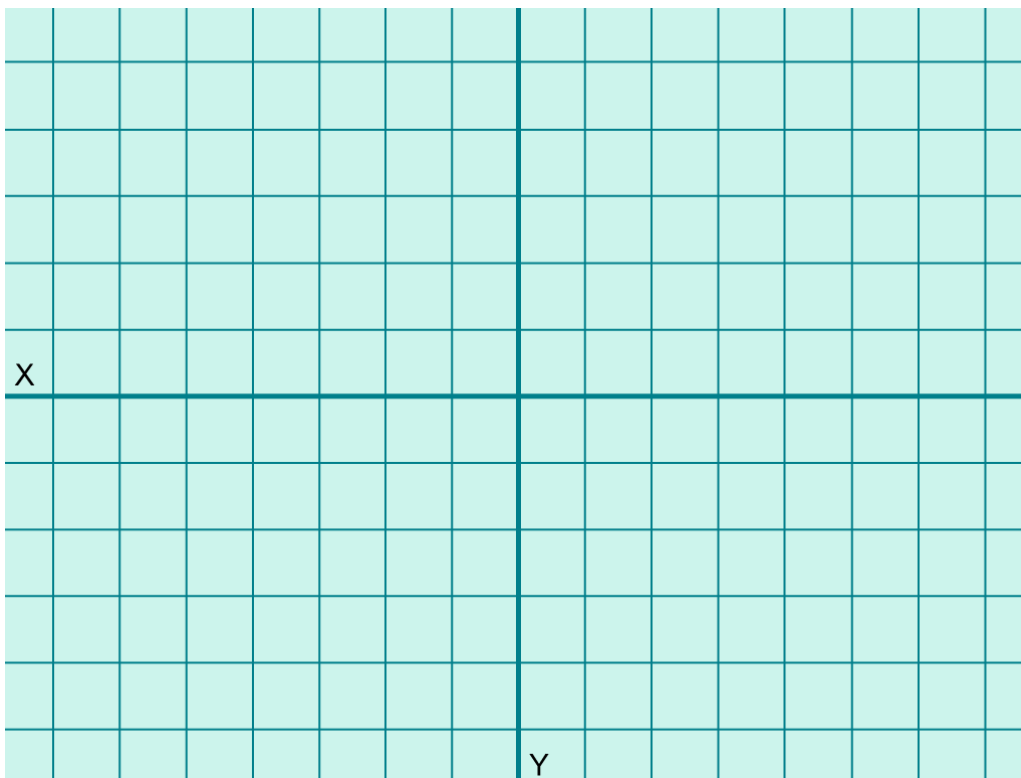
2.  $D + A + F$



Magnitude: \_\_\_\_\_

Direction: \_\_\_\_\_

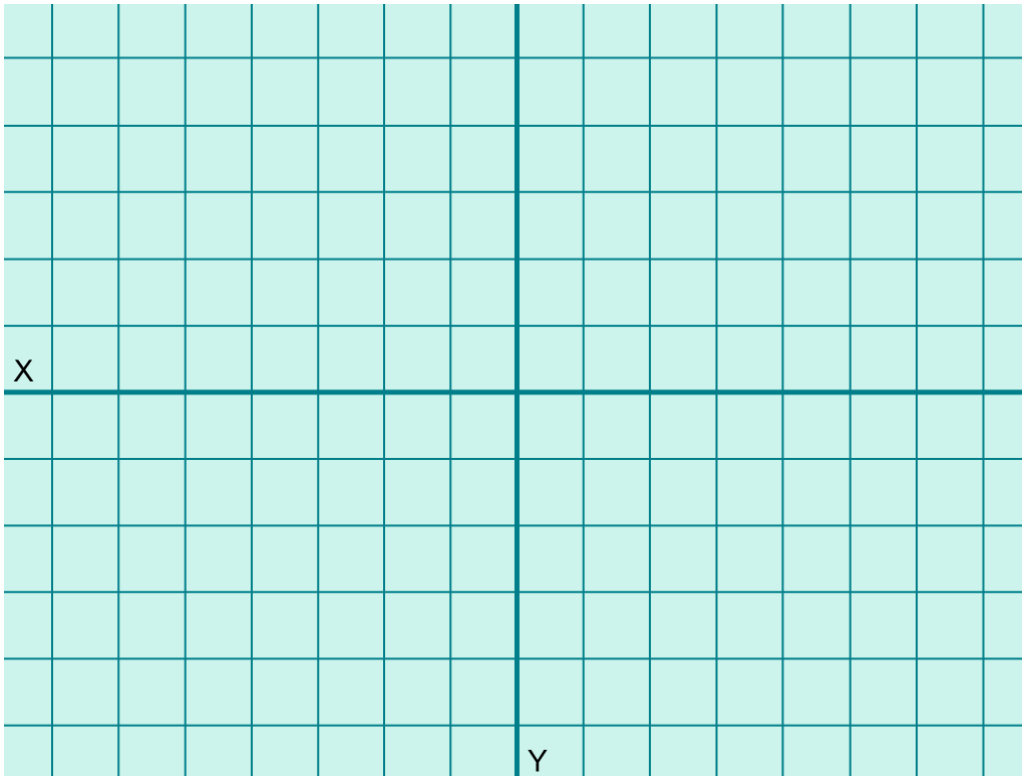
3.  $D + G + A$



Magnitude: \_\_\_\_\_

Direction: \_\_\_\_\_

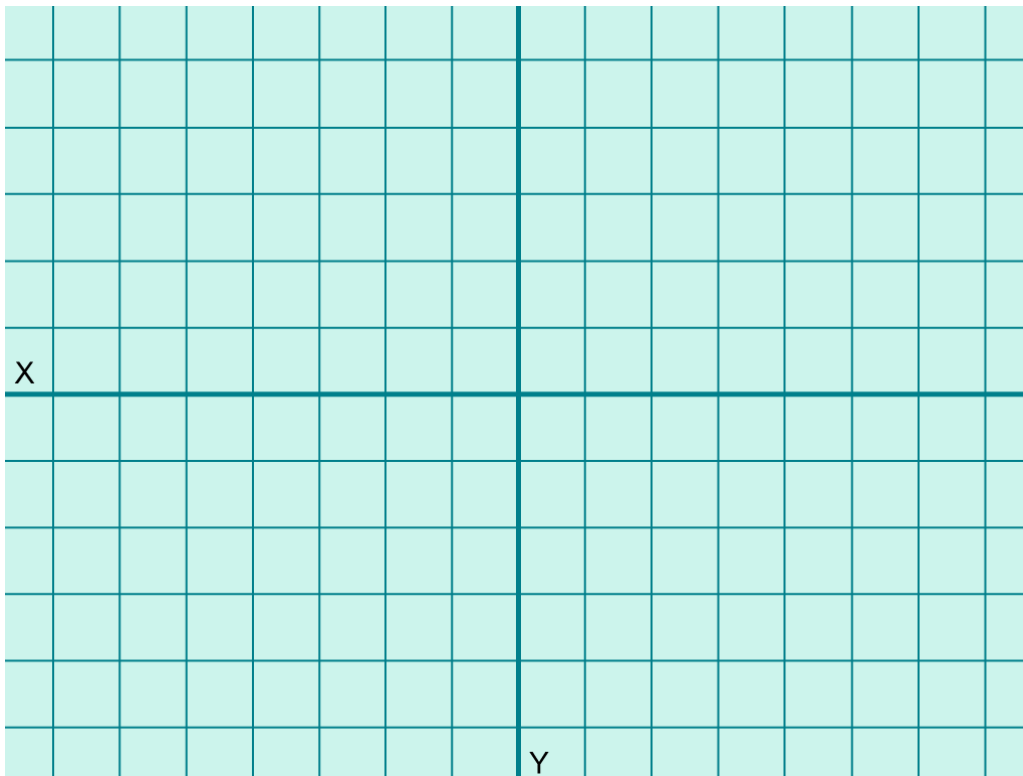
4.  $F + G + H$



Magnitude: \_\_\_\_\_

Direction: \_\_\_\_\_

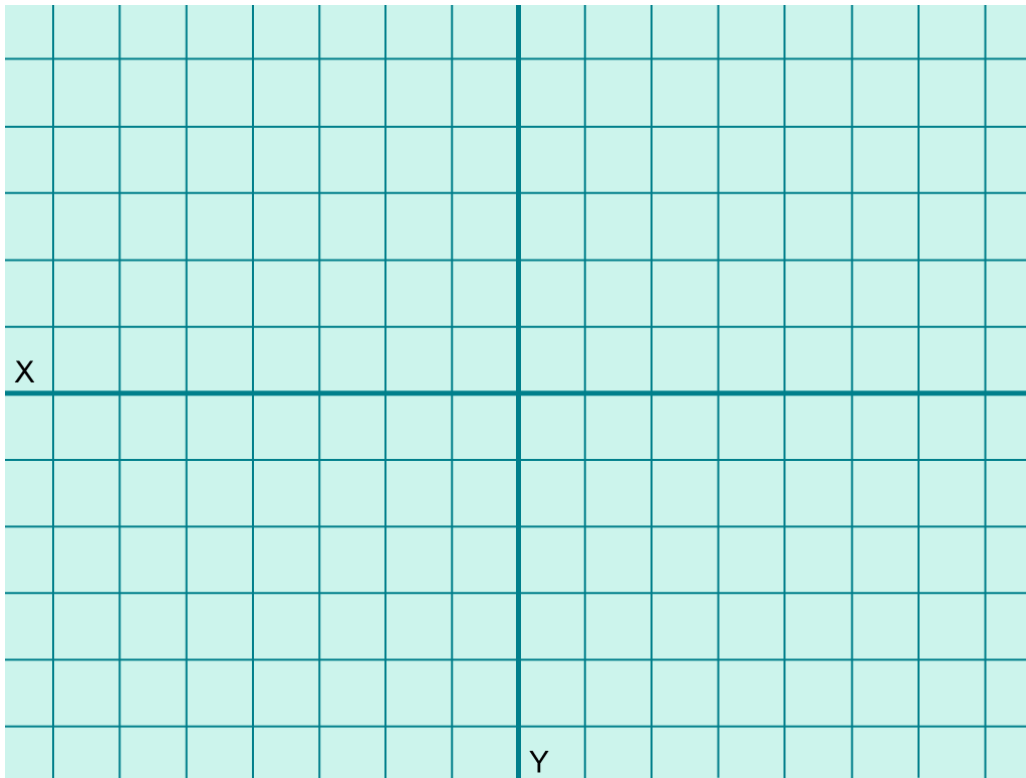
5.  $F + H + G$



Magnitude: \_\_\_\_\_

Direction: \_\_\_\_\_

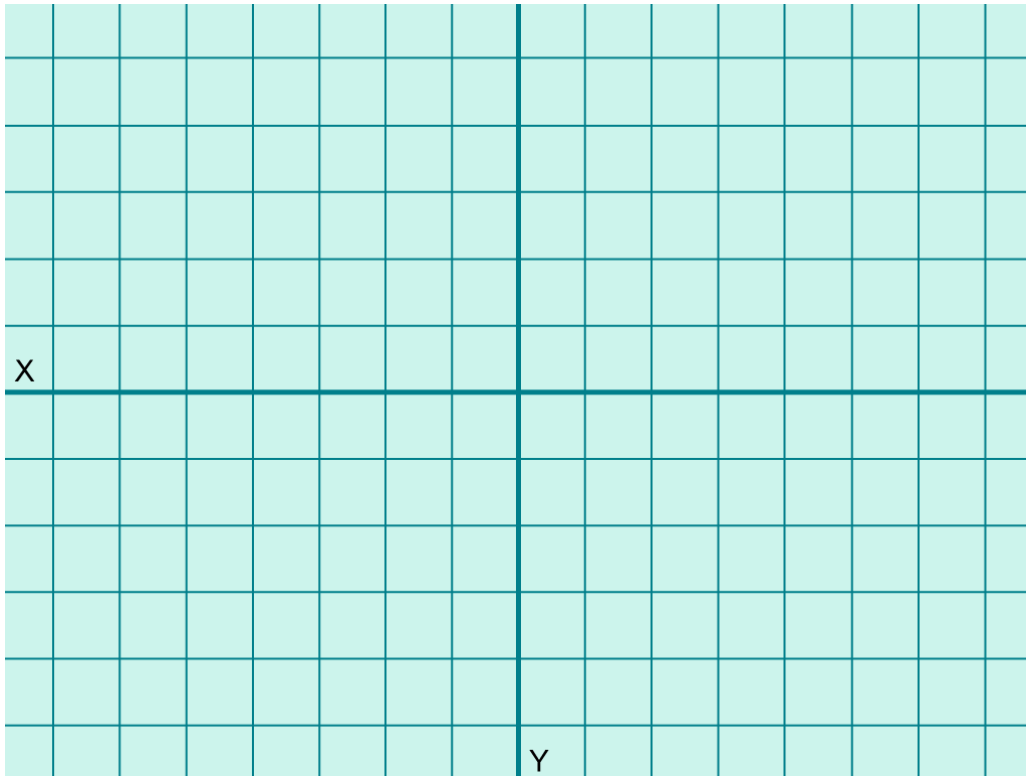
6.  $E + H + B$



Magnitude: \_\_\_\_\_

Direction: \_\_\_\_\_

7.  $F + E + G + A + B$



Magnitude: \_\_\_\_\_

Direction: \_\_\_\_\_