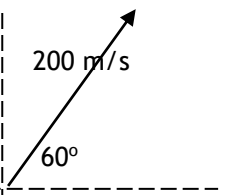
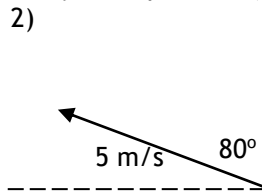
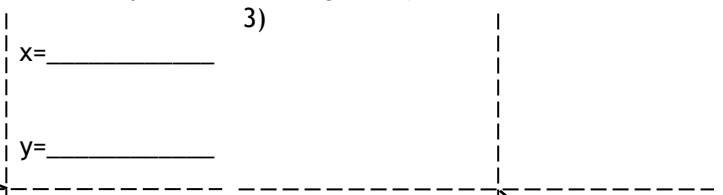
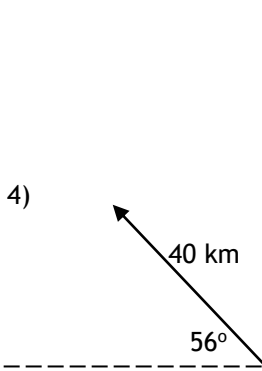
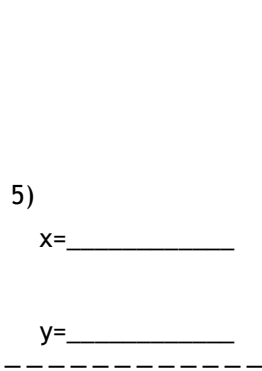
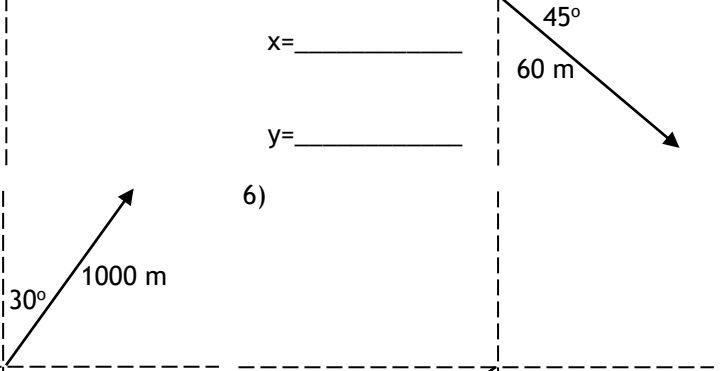


Part I: Break the vectors into their "x" and "y" components (remember positives and negatives)

<p>1)</p> <p>x= _____</p> <p>y= _____</p> 	<p>2)</p> <p>x= _____</p> <p>y= _____</p> 	<p>3)</p> <p>x= _____</p> <p>y= _____</p> 
<p>4)</p> <p>x= _____</p> <p>y= _____</p> 	<p>5)</p> <p>x= _____</p> <p>y= _____</p> 	<p>6)</p> <p>x= _____</p> <p>y= _____</p> 
<p>7) 30 m @ 40° W of N</p> <p>x= _____</p> <p>y= _____</p>	<p>8) 50 m/s S</p> <p>x= _____</p> <p>y= _____</p>	<p>9) 2000 km E</p> <p>x= _____</p> <p>y= _____</p>
<p>10) 600 m @ 40° E of S</p> <p>x= _____</p> <p>y= _____</p>	<p>11) 7 m/s @ 22° S of W</p> <p>x= _____</p> <p>y= _____</p>	<p>12) 40 m/s @ 10° N of E</p> <p>x= _____</p> <p>y= _____</p>

Part II: Construct the vectors using their "x" and "y" components. Draw a diagram and find the magnitude and direction of the resultant.

13)  $x=80\text{m}$   $y=60\text{m}$

$R=$  \_\_\_\_\_

$\theta=$  \_\_\_\_\_

14)  $x=-3\text{m/s}$   $y=7\text{m/s}$

$R=$  \_\_\_\_\_

$\theta=$  \_\_\_\_\_

15)  $x=-800\text{km}$   $y=-1000\text{km}$

$R=$  \_\_\_\_\_

$\theta=$  \_\_\_\_\_

16)  $x=-10\text{m}$   $y=10\text{m}$

$R=$  \_\_\_\_\_

$\theta=$  \_\_\_\_\_

17)  $x=20\text{m/s}$   $y=-30\text{m/s}$

$R=$  \_\_\_\_\_

$\theta=$  \_\_\_\_\_

18)  $x=-4\text{ km}$   $y=10\text{km}$

$R=$  \_\_\_\_\_

$\theta=$  \_\_\_\_\_

Part III: Add the vectors using the component method. Sketch a diagram, set up an "x-y chart," and show your work.

A=10 m E

B=20 m E

C=15 m S

D=20 m W

E=10m N

F=20 m @ 30° E of S

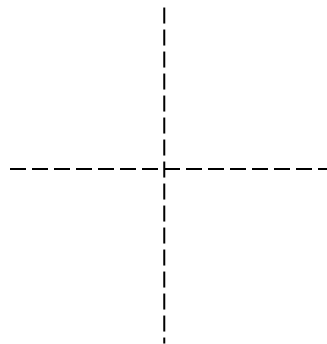
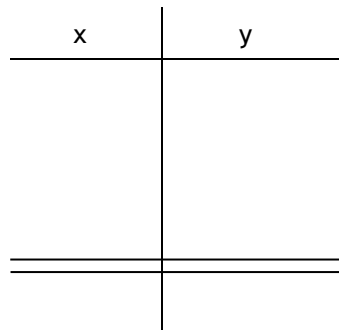
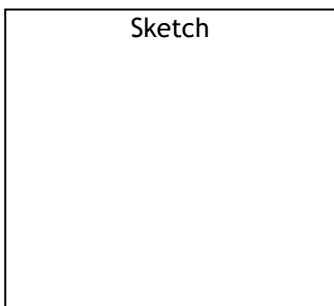
G=30 m @ 45° W of N

H=40 m @ 73° S of E

I=10 m @ 10° W of S

J=20 m NE

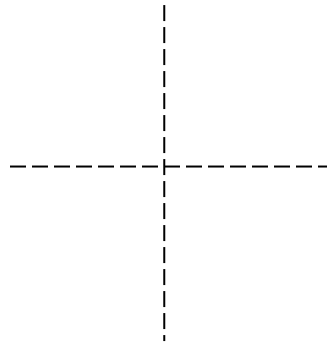
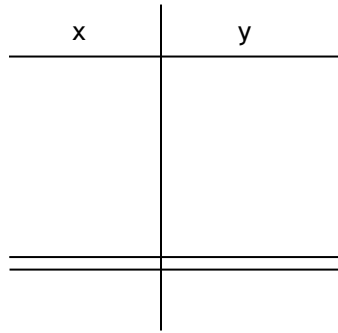
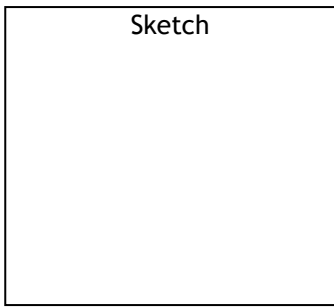
19) A + B + C



$R =$  \_\_\_\_\_

$\theta =$  \_\_\_\_\_

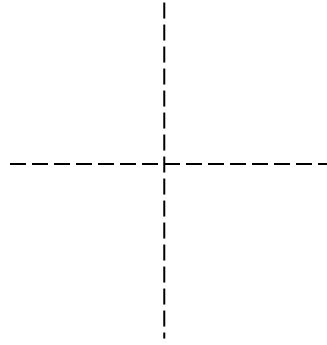
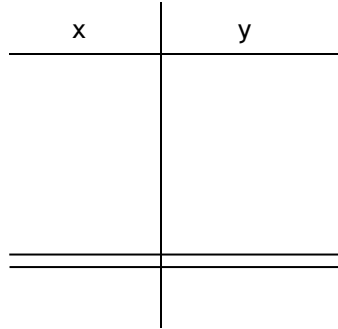
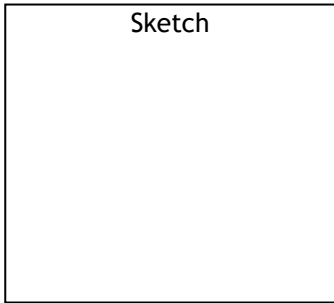
19)  $D + E + A$



$R =$  \_\_\_\_\_

$\theta =$  \_\_\_\_\_

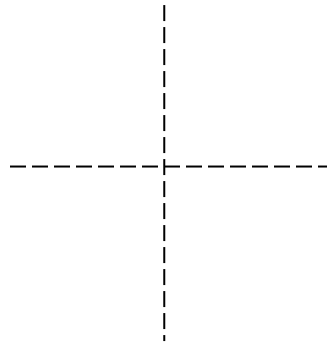
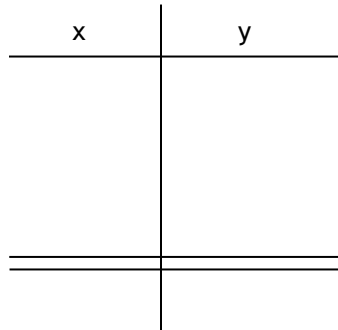
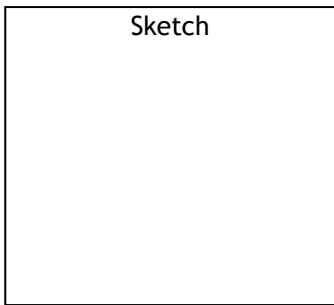
20)  $A + F + G$



$R =$  \_\_\_\_\_

$\theta =$  \_\_\_\_\_

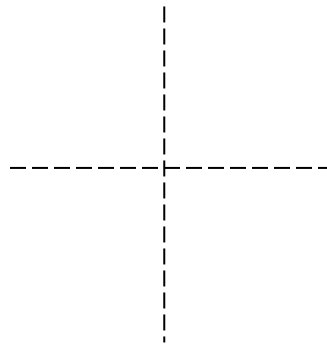
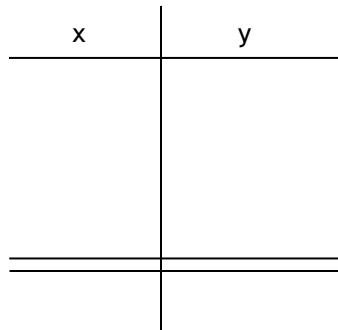
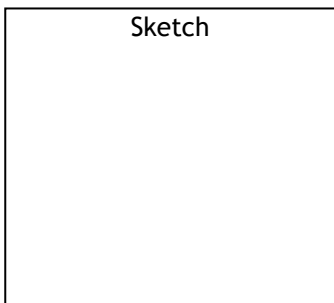
21)  $H + J + B$



$R =$  \_\_\_\_\_

$\theta =$  \_\_\_\_\_

22)  $A + B + C + I$



$R =$  \_\_\_\_\_

$\theta =$  \_\_\_\_\_