**3.1 Vector Quizlette (turn this in) Name**

B. Find these Vector Components:



 #1: 22.1 m x + 11.7 m y #2: -72.4 m, x + -38.5 m y #3: -44.0 m x + 9.36 m y

#1



#2



#3

 #4: 289 m x + -234 m y #5: -16.3 m x + 14.7 m y #6: -179 m x + -167 m y

#4

#5





#6

C. Add these component vectors:

|  |  |
| --- | --- |
| A: 12 m x + 34 m yB: 16 m x + 9.0 m yA+ B:#a28 m x + 43 m y | A: 1.20 m x + 3.10 m yB: -5.30 m x + 1.30 m yA+ B:#b-4.1 m x + 4.4 m y |
| A: 3.60 m x + -5.60 m yB: 12.5 m x + 8.10 m yA+ B:#c16.1 m x + 2.50 m y | A: 12.6 m x + 58.1 m yB: 16.5 m x + -96.0 m yA+ B:#d29.1 m x + -37.9 m y |

D. Draw these vectors as Angle Magnitude vectors. The vector should be an arrow, and calculate and label its magnitude (hypotenuse) and the angle:

 1) 10.0 m right and up 53.1o above the x axis, 2) 7.82 m left and up at 54.9o above the x axis

3) 6.44 m left and down 37.3o below the x axis, 4) 67.4 m right and down 33.3o below the x axis

1) 6.00 m x + 8.00 m y

2) -4.50 m x + 6.40 m y

3) -5.12 m x + -3.90 m y

4) 56.3 m x + -37.0 m y

E1: Adding two Angle Magnitude Vectors (Just like the test…)

Find the Components of these two vectors:

Carry three decimal places in your calculations.

Mag. = 12.0 m, θ = 21.0o

 1 = x + y

2 = x + y

Mag. = 8.00 m, θ = 17.0o

Add the Two Vectors: 1+2 = x + y

Draw a picture of the resultant vector with its tail on the origin, find its magnitude, and label an angle indicating its direction:

 14.9 m, up and right, above 53.4o the x-axis

E2: Adding two Angle Magnitude Vectors

Find the Components of these two vectors:

Carry three decimal places in your calculations.

 1 = x + y

Mag. = 18.0 m, θ = 43.0o

2 = x + y

Mag. = 42.0 m, θ = 12o

Add the Two Vectors: 1+2 = x + y

Draw a picture of the resultant vector with its tail on the origin, find its magnitude, and label an angle indicating its direction:

 34.9 m, right and down at 37o below the x axis