**Physics**

**PreQuiz 3.1 - Vectors**

Name

When I grow Up I Wanna Be

**Show your work, circle your answers with units, and use significant digits to receive full credit.**

Questions 1 and 2: Find the components of these vectors – write down 4 digits of precision.

1. (30.60 m x + 9.356 m y)

32 m

17o

A = A = x + y

2. (5.861 m x + -13.81 m y)

23o

B = B = x + y

15 m

3. Convert this vector component vector to an angle magnitude vector. Draw it as an arrow, and label any angle it makes with its value, and find the magnitude. (angle x: 23.4o, mag: 14.4 m/s + picture)

C = 13.2 m/s x + 5.70 m/s y

4. D = 16.2m x + -3.5 m y

E = -13.7m x + -4.2 m y Find:

D+E = x + y

|  |  |
| --- | --- |
| **2.5** | **-7.7** |
| **-29.9** | **-0.7** |

E-D = x + y

5. Calculate the sum of vectors A and B (From problem 1 and 2). **Draw the resultant vector** as an angle magnitude vector. (Label your angle and magnitude clearly – use an arrow)

(36.9 m, 6.96o below x axis +picture)