Name:_____ Date:_____

Mr. Croom's Physics Chapter 3: Two Dimensional Motion

Vector Addition Graphically 2

The following are example problems that involve adding vectors that are at different angles to each other. Do these on a separate sheet of graph paper!

Remember the steps you need to follow:

- Decide on a scale to use when you draw your vectors.
- Draw the first vector using this scale. Remember to draw it at the correct angle from the horizontal – use the protractor!!
- Draw the next vector in the list using the head to tail method – connect this vector's tail to the first one's head. Make sure again you draw this at the correct angle with respect to the horizontal, and you use the scale for the arrow's length.
- Keep drawing these vectors until you reach the last one.
- Now, to find the resultant, connect the tail of the very first vector to the head of the very last vector. Measure it and use the scale to convert the magnitude. Measure the angle using your protractor. Make sure you write **both** of these down as your answer, otherwise it is not fully correct! Record your answers on this page as well. Your resultants magnitude must fall with-in the range of +- 5% to get full credit. The angle must be with-in +- 3 degrees. Don't Forget Units. Staple your graphs to the back of this sheet. For full credit show all work.

Vectors	Answer!
1. 14 m/s^2 at 180 degrees 30 m/s^2 at 100 degrees 40 m/s^2 at 0 degrees	
2. 5 N at 90 degrees 9 N at 270 degrees 6 N at 45 degrees	
3. 22 m/s at 180 degrees 28 m/s at 270 degrees 14 m/s at 45 degrees	
4. 15 m/s^2 at 220 degrees 25 m/s^2 at 330 degrees 10 m/s^2 at 110 degrees	