PHYSICS INTRO REVIEW

Write the following as a regular number:

1) 10^{-2} = .01
2) 10^{4} = 10,000
3) 10^{-1} = .1

Express the following in Scientific notation:

4) .223 = 2.23×10^{-1}
5) .00398 = 3.98×10^{-3}
6) 340000 = 3.4×10^{5}

Express the following as a regular number:

7) 1.99×10^{3} = 1990
8) 7.77×10^{-2} = .00777
9) 5.38×10^{1} = 53.8

SI Prefixes Conversion: Complete the following expression

10) 30 mm = __.03____m
11) 120 kg = __12,000____g
12) 90 cm = __.9____m
13) .156 s = _156_____ms

Unit Conversions: 1 inch = 2.54cm, 5,280 ft = 1 mile

14) 40 in to cm: = 101.6 cm
15) 300 miles to feet = 1,584,000 ft
16) 198 in/s to ft/min = 990 ft/min

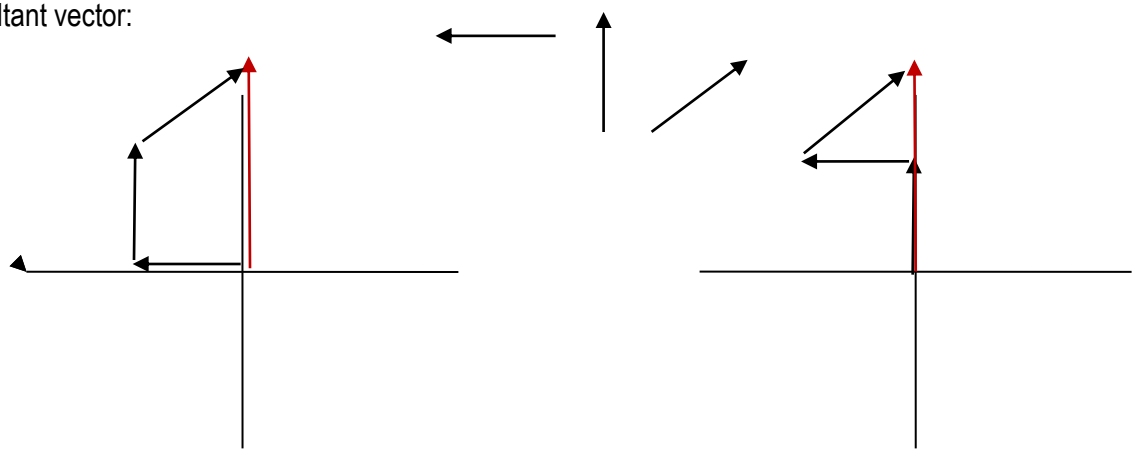
Significant Digits

For problems 1 - 10, in the first blank give the number of significant digits in the measurement.
For example: **3** **9070 m**

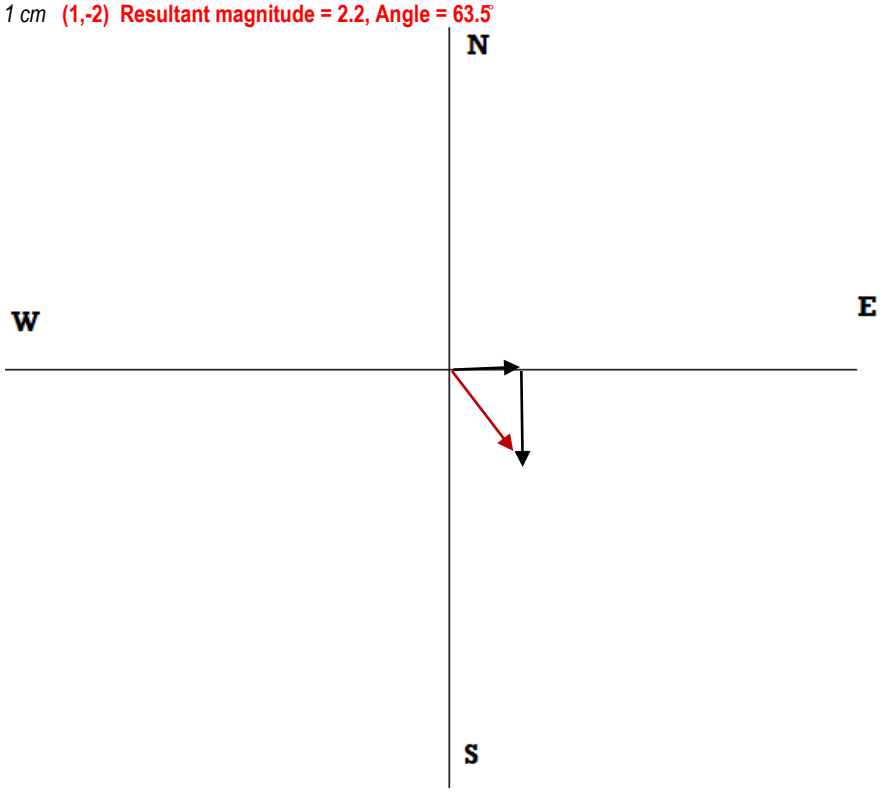
17. 2_____ 0.025 s
18. 4_____ 0.1020 g
19. 3_____ 405 kg
20. 1_____ 0.004 ml
21. 4_____ 20.50 m
22. 4_____ 20 010 mg
23. 2_____ 7 600 cm
24. 2_____ 2.0×10^{2} m
25. 3_____ 0.0102 kg
26. 1_____ 500 ml

Vectors

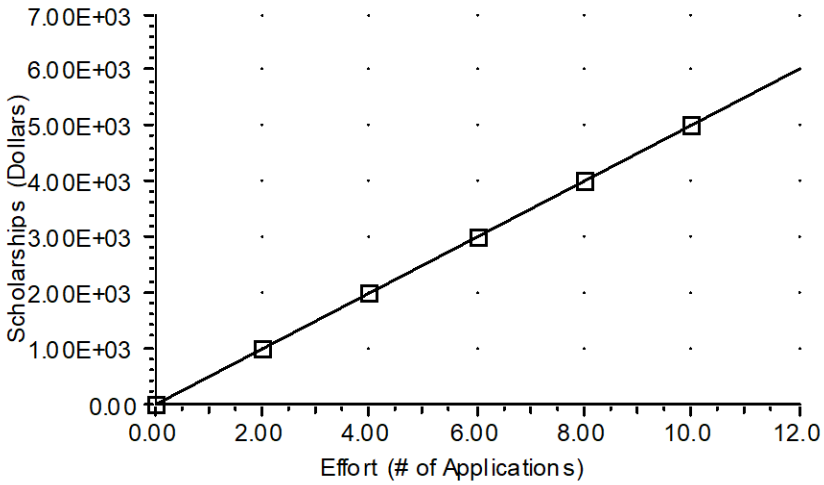
27) The following 3 vectors are to be added. Show two ways they are added on the following graphs AND draw the resultant vector:



28) Find the resultant vector & angle for a person who walks 2 feet east, 3 feet north, 5 feet west, 5 feet south, and 4 feet east: *Scale: 1 foot = 1 cm* **(1,-2) Resultant magnitude = 2.2, Angle = 63.5°**



Below is a graph of the relationship between scholarship awards and the effort students exerted trying to win scholarships.



Statistics:	Slope	Y Intercept	C.O.R.
Data Set 1	500±0.00	0.00±0.00	1.00

29) Write the mathematical equation that states the relationship described by the graph.
Y = m(x) + B, = Scholarships = 500 dollars/application x (# of applications) + 0

30) What does the y-intercept illustrate?
0 dollars for 0 applications

31) Explain what the slope means.
500 dollars per application

32) Using the mathematical model, how many applications would be needed to earn $8000?
16 applications