Physics 513	Name
Vaughan	Homework

1. Given the following data for the relationship between the resistance of an electrical element, R, and the resulting current flow, I, find the equation for current as a function of resistance. You need to straighten the curve and calculate the value of the constant of proportionality (and find the units of this constant)

Resistance (ohms)	Current (Amps)						
100	.66						
200	.32						
300	.22						
400	.17						
500	.13						



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2) A, B and C are different quantities.

a) If A is directly proportional to B, if I quadruple B, A _____

b) If A is directly proportional to B², if B is quartered, A ______

c) If A is inversely proportional to B, if B is reduced to 1/8th its value, A ______

d) If A is inversely proportional to B², if B is made 5 times larger, A _____

e) If quadrupling B causes A to halve, what relationship exists between them? Write the proportionality.

f) If A is directly proportional to B and inversely proportional to C, if B is tripled and C is halved, what happens to A?

g) If A is directly proportional to B^2 and directly proportional to the square root of C, what happens to A if B is increased by 6 times and C is quartered, what happens to A?