Name: _____

1. Match the equations below with the different types of variation relationships.

A - direct linear variation
B - direct quadratic variation
C - exponential variation
D - partial variation
E - inverse variation

$$y = kn^x \qquad y = kx \qquad y = \frac{k}{x} \qquad y = kx^2 \qquad y = kx + c$$

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2. The table below shows the price (P), in dollars, to buy different numbers (N) of concert tickets.

N	1	2	3	4
P	25	45	65	85

(a) Which of the variation types (**A-E** from question 1) apply to the relationship between N and P?

(b) Find all the constant values in this relationship and write the equation.

(c) How much would it cost to buy 15 tickets?

(d) How many tickets could be bought with $485?

3. The heat (H), in kJ, generated in a resistor was measured for different values of the current (I), in amps. The results are shown in this table.

I (amps)	1	2	3	4
H (kJ)	20	80	180	320

(a) Which of the variation types (**A-E** from question 1) apply to the relationship between I and H?

(b) Find all the constant values in this relationship and write the equation.

(c) Find the heat generated if the current was 15 amps.

4. The acceleration (a), in m/sec^2, of an object was measured for different forces (F), in newtons, applied to the object. The results are shown in the table below.

F (newtons)	0	20	40	60
a (m/sec^2)	0	160	320	480

(a) Which of the variation types (**A-E** from question 1) apply to the relationship between F and a?

(b) Find all the constant values in this relationship and write the equation.