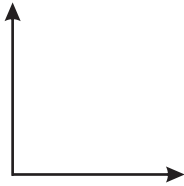*Name*: _____

1. For the following situations state which is the *independent variable* and label the axes correctly.
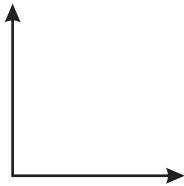
(a) The speed (S) of a ball when it reaches the ground is measured for different heights (H) that it is dropped.
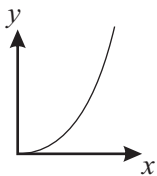
Independent Variable

[ ]

(b) The amount of carbon dioxide (A) sequestered is measured for a differing number of trees (N) in a plantation.
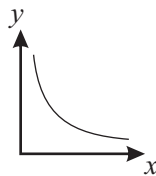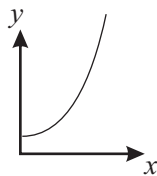
Independent Variable

[ ]
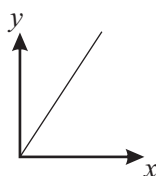
2. Match the graphs below with the different types of variation relationships.
   A - direct linear variation
   B - direct quadratic variation
   C - exponential variation
   D - partial variation
   E - inverse variation

3. Match the equations below with the different types of variation relationships.
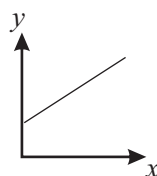   **A** - direct linear variation
   B - direct quadratic variation
   C - exponential variation
   D - partial variation
   E - inverse variation

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

[ ] [ ] [ ] [ ] [ ]

4. Which type of variation relationship (**A-E**) applies to the following sets of data?

(a)

x	2	4	6	8
y	24	12	8	6

[ ]

(b)

x	0	1	2	3
y	0	3	12	27

[ ]

(c)

x	0	1	2	3
y	0	6	12	18

[ ]

(d)

x	0	1	2	3
y	2	6	18	54

[ ]

(e)

x	0	1	2	3
y	0.5	1	2	4

[ ]

(f)

x	0	1	2	3
y	2	5	8	11

[ ]