

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**1** For the following equations:

**i** State the independent and dependent variables.

**ii** Construct a table of values using  $x = -3, -2, -1, 0, 1, 2, 3$ .

**iii** Plot the graph.

**a**  $y = x$

**b**  $y = 2x$

**c**  $y = \frac{1}{2}x$

**d**  $y = -2x$

**e**  $y = 2x + 3$

**f**  $y = -2x + 3$

**g**  $y = \frac{1}{4}x + 1$

**h**  $y = -\frac{1}{4}x + 1$

**2** Arrange the graphs of  $y = x$ ,  $y = 2x$  and  $y = \frac{1}{2}x$  in order of steepness. What part of the equation do you suspect controls the degree of steepness of a line?

i. \_\_\_\_\_

ii. \_\_\_\_\_

iii. \_\_\_\_\_

**3** Compare the graphs of  $y = 2x$  and  $y = -2x$ . What part of the equation do you suspect controls whether the graph slopes forwards or backwards?