

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

## Write the Equation

L2S3

- 1) The variable  $x$  varies jointly with  $y$  and  $z$ . The value of  $x = 36$  when  $y = 3$  and  $z = 2$ . Write an equation that relates  $x$ ,  $y$  and  $z$ .

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- 2) The variable  $d$  varies directly with square of  $b$  and inversely with  $c$ . The value of  $d = 8$  when  $b = 2$  and  $c = 4$ . Write an equation that relates  $b$ ,  $c$  and  $d$ .

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- 3) The variable  $p$  varies directly with  $q$  and  $r = -5$ . Write an equation that relates  $p$ ,  $q$  and  $r$ . The value of  $p = -250$  when  $q = 1$ .

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- 4) The variable  $a$  varies directly with the square of  $b$  and inversely with the square of  $c$ . The value of  $a = -3$  when  $b = 2$  and  $c = 4$ . Write an equation that relates  $a$ ,  $b$  and  $c$ .

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- 5) The variable  $n$  varies inversely with  $q$ . The value of  $n = 0.9$  when  $q = 3.6$ . Write an equation that relates  $n$  and  $q$ .

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## Write the Equation

- 1) The variable  $x$  varies jointly with  $y$  and  $z$ . The value of  $x = 36$  when  $y = 3$  and  $z = 2$ . Write an equation that relates  $x$ ,  $y$  and  $z$ .

$$\underline{x = 6yz}$$

- 2) The variable  $d$  varies directly with square of  $b$  and inversely with  $c$ . The value of  $d = 8$  when  $b = 2$  and  $c = 4$ . Write an equation that relates  $b$ ,  $c$  and  $d$ .

$$\underline{d = \frac{8}{c} b^2}$$

- 3) The variable  $p$  varies directly with  $q$  and inversely with the square of  $r$ . The value of  $p = 2$  when  $q = 1$  and  $r = -5$ . Write an equation that relates  $p$ ,  $q$  and  $r$ .

$$\underline{p = \frac{2}{r^2} q}$$

- 4) The variable  $a$  varies directly with the square of  $b$  and inversely with the square of  $c$ . The value of  $a = -3$  when  $b = 2$  and  $c = 4$ . Write an equation that relates  $a$ ,  $b$  and  $c$ .

$$\underline{a = \frac{-3}{c^2} b^2}$$

- 5) The variable  $n$  varies inversely with  $q$ . The value of  $n = 0.9$  when  $q = 3.6$ . Write an equation that relates  $n$  and  $q$ .

$$\underline{n = \frac{3.24}{q}}$$

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