

Name : _____

Missing Values

L2S5

1) The variable y varies jointly with x and z . The value of y is 312 when $x = 8$ and $z = 13$.

a) Write an equation that relates x , y and z . _____

b) Find the value of y when $x = 5$ and $z = 7$. _____

2) The variable m varies directly with n and inversely with h . The value of m is 1.8 when $h = 4.5$ and $n = 7.5$.

a) Write an equation that relates m , n and h . _____

b) Find the value of m when $h = 3$ and $n = 6$. _____

3) The variable u varies directly with v and inversely with w . The value of u is 30 when $v = 15$ and $w = 30$.

a) Write an equation that relates u , v and w . _____

b) Find the value of u when $v = 10$ and $w = 15$. _____

4) The variable p varies directly with q and inversely with r . The value of p is 135 when $q = 3$ and $r = 4$.

a) Write an equation that relates p , q and r . _____

b) Find the value of p when $q = 6$ and $r = 8$. _____

5) The variable d varies jointly with c and f . The value of d is $\frac{1}{3}$ when $c = \frac{5}{6}$ and $f = \frac{8}{9}$.

a) Write an equation that relates c , d and f . _____

b) Find the value of d when $c = \frac{1}{6}$ and $f = \frac{5}{7}$. _____

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Missing Values

1) The variable y varies jointly with x and z . The value of y is 312 when $x = 8$ and $z = 13$.

a) Write an equation that relates x , y and z .

$$y = 3xz$$

b) Find the value of y when $x = 5$ and $z = 7$.

$$y = 105$$

2) The variable m varies directly with n and inversely with h . The value of m is 1.8 when $h = 4.5$ and $n = 7.5$.

a) Write an equation that relates m , n and h .

$$m = \frac{1.08n}{h}$$

b) Find the value of m when $h = 3$ and $n = 5$.

$$m = 1.89$$

3) The variable u varies directly with v and inversely with w . The value of u is 30 when $w = 5$ and $v = 10$.

a) Write an equation that relates u , v and w .

$$u = \frac{3}{5}v$$

b) Find the value of v when $w = 15$ and $u = 2$.

$$v = 15$$

4) The variable p varies directly with q^3 and inversely with r . The value of p is 135 when $q = 3$ and $r = 4$.

a) Write an equation that relates p , q and r .

$$p = \frac{20q^3}{r}$$

b) Find the value of q when $r = 20$ and $p = 2$.

$$q = 2$$

5) The variable d varies jointly with c and f . The value of d is $\frac{1}{3}$ when $c = \frac{5}{6}$ and $f = \frac{8}{9}$.

a) Write an equation that relates c , d and f .

$$d = \frac{9}{20}cf$$

b) Find the value of d when $c = \frac{1}{6}$ and $f = \frac{5}{7}$.

$$d = \frac{3}{56}$$

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