

Direct Proportion

Question	General Equation	Find k	New Equation	Find Value using Equation
A is directly proportional to B , when $A = 10, B = 2$. Find A when $B = 12$.	$A = kB$	$10 = k \times 2$ so $k = 5$	$A = 5B$	$A = 5 \times 12 = 60$
(a) y is directly proportional to x , when $y = 55, x = 5$. Find y when $x = 9$	$y = kx$	$55 = k \times 5$ so $k = 11$	$y = 11x$	$y = 11 \times 9$ $y = 99$
(b) N is directly proportional to L , when $N = 1.8, L = 0.6$. Find N when $L = 2.5$	$N = kL$	$1.8 = k \times 0.6$ so $k = 3$	$N = 3L$	$N = 3 \times 2.5$ $N = 7.5$
(c) y is directly proportional to x . If $y = 5$ when $x = 10$, find y when $x = 60$	$y = kx$	$5 = k \times 10$ so $k = 0.5$	$y = 0.5x$	$y = 0.5 \times 60$ $y = 30$
(d) A is directly proportional to B and when $A = 12, B = 3$. Find A when $B = 20$	(e) h is directly proportional to V and $h = 36$ when $V = 8$. Find h when $V = 44$	(f) y is directly proportional to the x , and $y = 250$ when $x = 5$. Find x when $y = 7.5$	(g) y is directly proportional to x . When $x = 2, y = 64$. Find x when $y = 80$	
$A = kB$ $12 = k \times 3$ $k = 4$ $A = 4B$ $A = 4 \times 20$ $A = 80$	$h = kV$ $36 = k \times 8$ $k = 4.5$ $h = 4.5V$ $h = 4.5 \times 44$ $h = 198$	$y = kx$ $250 = k \times 5$ $k = 50$ $y = 50x$ $7.5 = 50 \times x$ $x = 0.15$	$y = kx$ $64 = k \times 2$ $k = 32$ $y = 32x$ $80 = 32 \times x$ $x = 2.5$	