Inverse and direct proportionality

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Name:

	Formula	i)	ii)
a) y is directly proportional to x. When x = 4, y = 16 i) Find the value of y when x = 6 ii) Find the value of x when y = 48	$y = 4x$	24	12
b) a is directly proportional to b. When a = 42, b = 7 i) Find the value of a when b = 10 ii) Find the value of b when a = 72	$a = 6b$	60	12
c) b is directly proportional to g. When b = 4, g = 24 i) Find the value of b when g = 66 ii) Find the value of g when b = 3.5	$b = \dfrac{1}{6}g$	11	21
d) p is directly proportional to the **square** of n. When p = 48, n = 4 i) Find the value of p when n = 2 ii) Find the value of n when p = 147	$p = 3n^2$	12	7

	Formula	i)	ii)
e) y is inversely proportional to x. When x = 8, y = 3 i) Find the value of y when x = 6 ii) Find the value of x when y = 2	$y = \dfrac{24}{x}$	4	12
f) a is inversely proportional to b. When a = 12, b = 5 i) Find the value of a when b = 4 ii) Find the value of b when a = 10	$a = \dfrac{60}{b}$	15	6
g) b is inversely proportional to g. When b = 4, g = 7 i) Find the value of b when g = 14 ii) Find the value of g when b = 56	$b = \dfrac{28}{g}$	2	0.5
h) p is inversely proportional to the **square** of n. When p = 2, n = 5 i) Find the value of p when n = 10 ii) Find the value of n when p = 12.5	$p = \dfrac{50}{n^2}$	0.5	2

Exam question:

y is directly proportional to x^2
When x = 3, y = 45
Work out the value of x when y = 980

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