

a y is proportional to x^3 . $y = 24$ when $x = 2$. Write y in terms of x . $y = 3x^3$ a cube formula	b $y \propto x^3$ and $y = 2$ when $x = 2$. Find y when $x = -4$. -16 cubing a negative x	c $y \propto \sqrt{x}$ and $y = 6$ when $x = 9$. Write y in terms of x . $y = 2\sqrt{x}$ a square root formula	d $y \propto \frac{1}{x}$ and $y = 6$ when $x = 2$. Find x when $y = 0.25$. 48 inverse with a decimal y
e $y \propto \sqrt[3]{x}$ and $y = 6$ when $x = 8$. Find x when $y = 15$. 125 a cube root, working backwards	f $y \propto \frac{1}{\sqrt{x}}$ and $y = 6$ when $x = 4$. Find y when $x = 9$. 4 inverse to a square root	g $y \propto x^2$ and $y = a$ when $x = 2$. Find y in terms of a when $x = 6$. $9a$ y in terms of a letter	h $y \propto x^n$. $y = 3$ when $x = 2$ and $y = 24$ when $x = 4$. Find n . 3 finding the power
i $y \propto x^2$. x increases by 10%. By what percentage does y increase? 21% a percentage change with a square	j $y \propto \frac{1}{x^2}$, $x > 0$ and $y = 5$ when $x = 2$. Write x in terms of y . $x = \sqrt{\frac{20}{y}}$ x in terms of y	k $y \propto x^2$ and $x \propto \sqrt{z}$. Write a statement linking y and z . $y \propto z$ combining two proportions	l $y \propto x^2$. $y = 18$ when $x = p$, and $y = 32$ when $x = p + 1$. p is positive. Find p . $p = 3$ an unknown x from two values

The Maths Habit

a y is proportional to x^3 . $y = 24$ when $x = 2$. Write y in terms of x . $y = 3x^3$ a cube formula	b $y \propto x^3$ and $y = 2$ when $x = 2$. Find y when $x = -4$. -16 cubing a negative x	c $y \propto \sqrt{x}$ and $y = 6$ when $x = 9$. Write y in terms of x . $y = 2\sqrt{x}$ a square root formula	d $y \propto \frac{1}{x}$ and $y = 6$ when $x = 2$. Find x when $y = 0.25$. 48 inverse with a decimal y
e $y \propto \sqrt[3]{x}$ and $y = 6$ when $x = 8$. Find x when $y = 15$. 125 a cube root, working backwards	f $y \propto \frac{1}{\sqrt{x}}$ and $y = 6$ when $x = 4$. Find y when $x = 9$. 4 inverse to a square root	g $y \propto x^2$ and $y = a$ when $x = 2$. Find y in terms of a when $x = 6$. $9a$ y in terms of a letter	h $y \propto x^n$. $y = 3$ when $x = 2$ and $y = 24$ when $x = 4$. Find n . 3 finding the power
i $y \propto x^2$. x increases by 10%. By what percentage does y increase? 21% a percentage change with a square	j $y \propto \frac{1}{x^2}$, $x > 0$ and $y = 5$ when $x = 2$. Write x in terms of y . $x = \sqrt{\frac{20}{y}}$ x in terms of y	k $y \propto x^2$ and $x \propto \sqrt{z}$. Write a statement linking y and z . $y \propto z$ combining two proportions	l $y \propto x^2$. $y = 18$ when $x = p$, and $y = 32$ when $x = p + 1$. p is positive. Find p . $p = 3$ an unknown x from two values

The Maths Habit