

## Direct and Inverse Proportion Revision

(a)	(b)	(c)	(d)												
<p><math>y</math> is directly proportional to <math>x</math>. When <math>x = 8, y = 40</math>. Find a formula for <math>y</math> in terms of <math>x</math>.</p>	<p><math>F</math> is inversely proportional to <math>t</math>. When <math>F = 2.5, t = 4</math>. Find a formula for <math>F</math> in terms of <math>t</math>.</p>	<p><math>p</math> is directly proportional to the square of <math>q</math>. When <math>q = 3, p = 90</math>. Find a formula linking <math>p</math> and <math>q</math>.</p>	<p><math>y</math> is directly proportional to <math>x^3</math>. When <math>x = 5, y = 2500</math>. Find a formula for <math>y</math> in terms of <math>x</math>.</p>												
(e)	(f)	(g)	(h)												
<p>Sketch the graph showing <math>y</math> is inversely proportional to <math>x</math>.</p>	<p><math>y</math> is directly proportional to <math>\sqrt{x}</math>. When <math>x = 4, y = 0.5</math>. Find the value of <math>y</math> when <math>x = 64</math>.</p>	<p><math>d</math> is inversely proportional to <math>w^2</math>. When <math>w = 0.5, d = 12</math>. Find a formula for <math>d</math> in terms of <math>w</math>.</p>	<p><math>T</math> is inversely proportional to <math>\sqrt{L}</math>. When <math>L = 16, T = 25</math>. Find the value of <math>L</math> when <math>T = 10</math>.</p>												
(i)	(j)														
<p>The distance <math>d</math> travelled by a ball is proportional to the square of the time taken, <math>t</math>. After 4 seconds the ball has travelled 40 m. (i) Find a formula linking <math>d</math> and <math>t</math>. (ii) Find the distance travelled after 7 seconds.</p>	<table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse; text-align: center;"> <tbody> <tr> <td style="padding: 5px;"><math>x</math></td> <td style="padding: 5px;">1</td> <td style="padding: 5px;">2</td> <td style="padding: 5px;">5</td> <td style="padding: 5px;">10</td> <td style="padding: 5px;">20</td> </tr> <tr> <td style="padding: 5px;"><math>y</math></td> <td style="padding: 5px;">100</td> <td style="padding: 5px;">25</td> <td style="padding: 5px;">4</td> <td style="padding: 5px;"></td> <td style="padding: 5px;"></td> </tr> </tbody> </table> <p>(i) Find a formula for <math>y</math> in terms of <math>x</math>. (ii) Complete the table.</p>			$x$	1	2	5	10	20	$y$	100	25	4		
$x$	1	2	5	10	20										
$y$	100	25	4												