

# Fill in the Blanks

# More Inverse Proportion

General Statement	General Equation	Table of Values	Value of $k$	Specific Equation								
$y \propto \frac{1}{x^2}$	$y = \frac{k}{x^2}$	<table border="1"> <tr> <td><math>x</math></td> <td>1</td> <td>2</td> <td>5</td> </tr> <tr> <td><math>y</math></td> <td>100</td> <td>25</td> <td>4</td> </tr> </table>	$x$	1	2	5	$y$	100	25	4	$k = 100$	$y = \frac{100}{x^2}$
$x$	1	2	5									
$y$	100	25	4									
$y \propto \frac{1}{\sqrt{x}}$	$y = \frac{k}{\sqrt{x}}$	<table border="1"> <tr> <td><math>x</math></td> <td>1</td> <td>4</td> <td>25</td> </tr> <tr> <td><math>y</math></td> <td>10</td> <td>5</td> <td>2</td> </tr> </table>	$x$	1	4	25	$y$	10	5	2	$k = 10$	$y = \frac{10}{\sqrt{x}}$
$x$	1	4	25									
$y$	10	5	2									
$y \propto \frac{1}{x^3}$	$y = \frac{k}{x^3}$	<table border="1"> <tr> <td><math>x</math></td> <td>1</td> <td>2</td> <td>10</td> </tr> <tr> <td><math>y</math></td> <td>1000</td> <td>125</td> <td>1</td> </tr> </table>	$x$	1	2	10	$y$	1000	125	1	$k = 1000$	$y = \frac{1000}{x^3}$
$x$	1	2	10									
$y$	1000	125	1									
$y \propto \frac{1}{\sqrt[3]{x}}$	$y = \frac{k}{\sqrt[3]{x}}$	<table border="1"> <tr> <td><math>x</math></td> <td>1</td> <td>8</td> <td>125</td> </tr> <tr> <td><math>y</math></td> <td>40</td> <td>20</td> <td>8</td> </tr> </table>	$x$	1	8	125	$y$	40	20	8	$k = 40$	$y = \frac{40}{\sqrt[3]{x}}$
$x$	1	8	125									
$y$	40	20	8									
$y \propto \frac{1}{x}$	$y = \frac{k}{x}$	<table border="1"> <tr> <td><math>x</math></td> <td>1</td> <td>4</td> <td>10</td> </tr> <tr> <td><math>y</math></td> <td>30</td> <td>7.5</td> <td>3</td> </tr> </table>	$x$	1	4	10	$y$	30	7.5	3	$k = 30$	$y = \frac{30}{x}$
$x$	1	4	10									
$y$	30	7.5	3									
$y \propto \frac{1}{x^2}$	$y = \frac{k}{x^2}$	<table border="1"> <tr> <td><math>x</math></td> <td>1</td> <td>2</td> <td>5</td> </tr> <tr> <td><math>y</math></td> <td>3</td> <td>0.75</td> <td>0.12</td> </tr> </table>	$x$	1	2	5	$y$	3	0.75	0.12	$k = 3$	$y = \frac{3}{x^2}$
$x$	1	2	5									
$y$	3	0.75	0.12									
$y \propto \frac{1}{\sqrt{x}}$	$y = \frac{k}{\sqrt{x}}$	<table border="1"> <tr> <td><math>x</math></td> <td>1</td> <td>4</td> <td>25</td> </tr> <tr> <td><math>y</math></td> <td><math>\frac{1}{6}</math></td> <td><math>\frac{1}{12}</math></td> <td><math>\frac{1}{30}</math></td> </tr> </table>	$x$	1	4	25	$y$	$\frac{1}{6}$	$\frac{1}{12}$	$\frac{1}{30}$	$k = \frac{1}{6}$	$y = \frac{1}{6\sqrt{x}}$
$x$	1	4	25									
$y$	$\frac{1}{6}$	$\frac{1}{12}$	$\frac{1}{30}$									
$y \propto \frac{1}{x^3}$	$y = \frac{k}{x^3}$	<table border="1"> <tr> <td><math>x</math></td> <td>1</td> <td><math>\sqrt{3}</math></td> <td>2</td> </tr> <tr> <td><math>y</math></td> <td><math>\sqrt{3}</math></td> <td>3</td> <td><math>\frac{\sqrt{3}}{8}</math></td> </tr> </table>	$x$	1	$\sqrt{3}$	2	$y$	$\sqrt{3}$	3	$\frac{\sqrt{3}}{8}$	$k = \sqrt{3}$	$y = \frac{\sqrt{3}}{x^3}$
$x$	1	$\sqrt{3}$	2									
$y$	$\sqrt{3}$	3	$\frac{\sqrt{3}}{8}$									
$y \propto \frac{1}{x^2}$	$y = \frac{k}{x^2}$	<table border="1"> <tr> <td><math>x</math></td> <td>0.5</td> <td>2</td> <td>4</td> </tr> <tr> <td><math>y</math></td> <td><math>4a</math></td> <td><math>\frac{a}{4}</math></td> <td><math>\frac{a}{16}</math></td> </tr> </table>	$x$	0.5	2	4	$y$	$4a$	$\frac{a}{4}$	$\frac{a}{16}$	$k = a$	$y = \frac{a}{x^2}$
$x$	0.5	2	4									
$y$	$4a$	$\frac{a}{4}$	$\frac{a}{16}$									