Question	Equation	Find k	New Equation	Find Value using Equation
$\boldsymbol{A}$ is inversely proportional to $\boldsymbol{B}$, when $\boldsymbol{A = 5, B = 6}$. Find $\boldsymbol{A}$ when $\boldsymbol{B = 10}$.	$A = \frac{k}{B}$	$5 = \frac{k}{6}$ so $k = 30$	$A = \frac{30}{B}$	$A = \frac{30}{10} = 3$
(a) $\boldsymbol{y}$ is inversely proportional to $\boldsymbol{x}$, when $\boldsymbol{y = 12, x = 5}$. Find $\boldsymbol{y}$ when $\boldsymbol{x = 4}$.	$y = \frac{k}{x}$	$12 = \frac{k}{5}$ $k = 60$	$y = \frac{60}{x}$	$y = \frac{60}{4}$ $y = 15$
(b) $\boldsymbol{N}$ is inversely proportional to $\boldsymbol{L}$, when $\boldsymbol{N = 2.5,\ L = 8}$. Find $\boldsymbol{N}$ when $\boldsymbol{L = 4}$.	$N = \frac{k}{L}$	$2.5 = \frac{k}{8}$ $k = 20$	$N = \frac{20}{L}$	$N = \frac{20}{4}$ $N = 5$
(c) $\boldsymbol{y}$ is inversely proportional to $\boldsymbol{x}$. If $\boldsymbol{y = 5}$ when $\boldsymbol{x = 8}$, find $\boldsymbol{y}$ when $\boldsymbol{x = 20}$	$y = \frac{k}{x}$	$5 = \frac{k}{8}$ $k = 40$	$y = \frac{40}{x}$	$y = \frac{40}{20}$ $y = 2$

(d) $\boldsymbol{A}$ is inversely proportional to $\boldsymbol{B}$ and when $\boldsymbol{A = 12, B = 3}$. Find $\boldsymbol{A}$ when $\boldsymbol{B = 10}$

$A = \frac{k}{B}$

$12 = \frac{k}{3}$ $\quad k = 36$

$A = \frac{36}{B}$

$A = \frac{36}{10}$ $\quad A = 3.6$

(e) h is inversely proportional to V and $h = 36$ when $V = 8$. Find h when $V = 20$

$h = \frac{k}{V}$

$36 = \frac{k}{8}$ $\quad k = 288$

$h = \frac{288}{V}$

$h = \frac{288}{20}$ $\quad h = 14.4$

(f) y is inversely proportional to x, and $y = 0.2$ when $x = 5$. Find x when $y = 25$

$y = \frac{k}{x}$

$0.2 = \frac{k}{5}$ $\quad k = 1$

$y = \frac{1}{x}$

$25 = \frac{1}{x}$ $\quad x = \frac{1}{25}$

$x = 0.04$

(g) y is inversely proportional to x. When $x = 2, y = 64$. Find x when $y = 80$.

$y = \frac{k}{x}$

$64 = \frac{k}{2}$ $\quad k = 128$

$y = \frac{128}{x}$

$80 = \frac{128}{x}$

$x = 1.6$