|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Question | Equation | Find k | New Equation | Find Value using Equation |
| $A$ is inversely proportional to $B^{2}$, and when $A=6, B=5$.Find $A$ when $B=2$ | $$A=\frac{k}{B^{2}}$$ | $6=\frac{k}{5^{2}}$ so $k=150$ | $$A=\frac{150}{B^{2}}$$ | $$A=\frac{150}{2^{2}}=37.5$$ |
| (a) $y$ is inversely proportional to $x^{2}$ and when $y=10$, $x=2$.Find $y$ when $x=5$ |  |  |  |  |
| (b) $y$ is inversely proportional to $x^{3}$, and $y=5$ when $x=3$.Find $y$ when $x=10$ |  |  |  |  |
| (c) $A$ is inversely proportional to $\sqrt{B}$ and when $A=90, B=9$.Find $A$ when $B=25$ |  |  |  |  |
| (d) $h$ is inversely proportional to $V^{2}$ and $h=3$ when $V=8$.Find $h$ when $V=4$ | (e) $B$ is inversely proportional to $\sqrt{C}$, and when $B=18, C=16$. Find $B$ when $C=0.36$ | (f) $y$ is inversely proportional to $x^{3}$, and $y=20$ when $x=6$.Find $x $when $y=67.5$ | (g) $y$ is inversely proportional to $\sqrt[3]{x}$. When $x=8, y=4$, find $x$ when $y=0.8$ |