

Inverse Variation

“y varies inversely as x”

$$y = \frac{k}{x} \quad \leftarrow \text{Constant of variation}$$

Solve. Assume y varies inversely as x.

1. If $x = 8$ when $y = 9$,
find x when $y = 18$.

2. If $y = 50$ when $x = 4$,
find y when $x = 40$.

3. If $x = 80$ when $y = 0.25$,
find y when $x = 2$.

4. If $y = 6$ when $x = -4$,
find x when $y = -3$.

5. The current varies inversely as the resistance. When the resistance in a certain electrical circuit is 10 ohms, the current is 24 amps. Find the current when the resistance is 20 ohms.

6. The rent for an apartment varies inversely as the number of people sharing the cost. Four people sharing an apartment pay \$450 each per month. What would be the cost if three people were to share the cost?