READ the problem and determine the formula needed in order to solve the problem.

The cost of bananas *varies directly* with their weight. Mark bought 3.5 pounds of bananas for $1.12. What would 4.5 pounds of bananas cost?	The sound produced by a string inside a piano *varies inversely* as its length. Suppose a string 2 feet long vibrates 300 cycles per second. What would be the frequency of a string 4 feet long?
Lauren's salary *varies directly* with the number of hours worked. If Lauren earns $9.50 and hour, how much will she earn after working 40 hours?	The number of employees scheduled *varies inversely* with the number of hours worked. If 6 employees take 8 hours to finish a job, how many hours will it take if 4 employees do the same job?

Set up a proportion and solve.

1. If a basketball player scores 27 points over 3 games, how many games will it take for him to score 150 points?	2. A restaurant uses 12 bottles of ketchup over 3 weeks. How many bottles of ketchup will it use in 10 weeks?

Given that y *varies directly* as x

3. If $x = 3$ when $y = 21$, find x when $y = 1$	3. If $x = 5$ when $y = -4$, find y when $x = 12$

Given that y *varies inversely* as x

3. If $x = 2$ when $y = 6$, find x when $y = 24$	3. If $x = -4$ when $y = 3$, find y when $x = 6$

7) $\frac{k}{k+7} = \frac{8}{2}$

8) $\frac{8}{n-3} = \frac{6}{n}$

9) $\frac{3}{8} = \frac{a}{a+11}$

10) $\frac{6}{x+3} = \frac{4}{x+7}$

11) $\frac{n-4}{n-1} = \frac{4}{5}$

12) $\frac{x-8}{x-1} = \frac{8}{9}$

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Solve each proportion.

1) $\frac{8}{2} = \frac{n}{6}$

2) $\frac{9}{10} = \frac{6}{r}$

3) $\frac{8}{x} = \frac{4}{6}$

4) $\frac{x+1}{2} = \frac{2}{3}$

5) $\frac{12}{b+3} = \frac{9}{2}$

6) $\frac{v+2}{2} = \frac{7}{3}$