8.5E Solve Problems Involving Direct Variation

1 The value of y varies directly with x. When y= 75, x= $\frac{1}{2}$. What is the value of y when x is 2.25? Please answer using decimal notation.

2 The value of *y* varies directly with *x*. When *y* = 55, *x* = $\frac{1}{4}$.

What is the value of *y* when *x* is 2.5 ? Please answer using decimal notation.

3 The value of *y* varies directly with *x*. When the value *y* is $\frac{3}{5}$, the value of *x* is 0.125.

What is the value of x when the value of *y* is 12? Please answer using decimal notation.

4 A soda manufacturing plant manufactures 12,000 bottles of soda in an 8 hour shift. The soda produced varies directly with the hours worked. How many hours would it take the soda manufacturing plant to manufacture 22,500 bottles of soda?

5 A car traveled 180 miles and used 6 gallons of gas. If the same car traveled 1,260 miles at the same rate, how many gallons of gas would be used?

6 Gary's salary varies directly as the number of days he works. If his salary for five days is $52.00, how much would it be for 12 days?

8 The distance a jet travels varies directly with the number of hours flown. A jet travels 1,350 miles in three hours. If the jet continues to travel at this same rate, how far will it fly in seven hours?

7 Marlon's earning varies directly as the number of hours he works changes. If he earns $210 working 24 hours, how much money does he earn per hour?

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