Unit: Ratios and Proportions Name:_____

Lesson 5: Direct Variation with Equations Hour:_____

Assignment 5

The variables $x$ and $y$ vary directly. Use the variables to write an equation that relates $x$ and $y$.

1. $y = 4; x = 2$

2. $y = 25; x = 5$

3. $y = 45; x = 40$

4. $y = 20; x = 12$

Tell whether $x$ and $y$ show direct variation. Explain your reasoning.

5. $xy = 3$

6. $x = \frac{1}{3}y$

7. $y - 5 = 2x$

8. $\frac{x}{y} = 2$

Write a direct variation equation. Then solve.

9. Suppose y varies directly as x. If $y = 3$ when $x = 15$, find x when $y = 5$.

10. Suppose y varies directly as x. If $y = -7$ when $x = -14$, find x when $y = 10$.

11. Suppose y varies directly as x. If $x = 15$ when $y = 12$, find x when $y = 21$.

12. Suppose y varies directly as x. If $x = 24$ when $y = 8$, find y when $x = 33$.

13. Suppose y varies directly as x. If $x = 27$ when $y = 6$, find x when $y = 2$.