NAME _____ DATE _____ PERIOD _____

Lesson 3 Skills Practice

Equations in y = mx Form

For Exercises 1–3, determine whether each linear function is a direct variation. If so, state the constant of variation.

1.

Price, x	\$5	\$10	\$15	\$20
Tax, y	\$0.41	\$0.82	\$1.23	\$1.64

Direct variation. \$0.082 per \$1

2.

Hours, x	11	12	13	14
Distance, y (miles)	154	167	180	193

No direct variation

3.

Age, x	8	9	10	11
Grade, y	3	4	5	6

No direct variation

For Exercises 4–12, y varies directly with x. Write an equation for the direct variation. Then find each value.

4. If $y = 8$ when $x = 3$, find y when $x = 45$. $y = \frac{8}{3}x$; 120

5. If $y = -4$ when $x = 10$, find y when $x = 2$. $y = -\frac{2}{5}x$; −0.8

6. If $y = 27$ when $x = 8$, find y when $x = 11$. $y = \frac{27}{8}x$; 37.125

7. Find y when $x = 12$, if $y = 2$ when $x = 5$. $y = \frac{2}{5}x$; 4.8

8. Find y when $x = 3$, if $y = -4$ when $x = -9$. $y = \frac{4}{9}x$; $1\frac{1}{3}$

9. Find y when $x = -6$, if $y = 15$ when $x = -5$. $y = -3x$; 18

10. If $y = 20$ when $x = 8$, what is the value of x when $y = -2$? $y = \frac{5}{2}x$; −0.8

11. If $y = -30$ when $x = 15$, what is the value of x when $y = 60$? $y = -2x$; −30

12. If $y = 42$ when $x = 15$, what is the value of x when $y = 70$? $y = \frac{14}{5}x$; 25