Name _____ Date _____

LESSON 3.6

Practice C

For use with the lesson "Model Direct Variation"

Tell whether the equation represents direct variation. If so, identify the constant of variation.

1. $y - 2x = 0$

2. $3x + y = -2$

3. $6.5x = 1.3y$

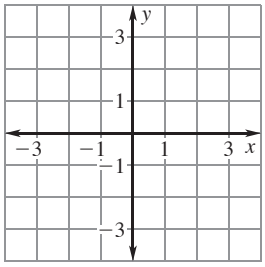
4. $3y - 2x = 6x$

5. $4x + 3y = 9$

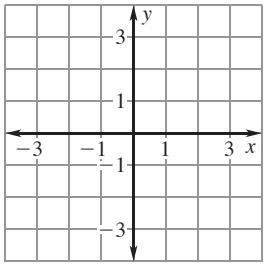
6. $xy + 4 = 0$

Graph the direct variation equation.

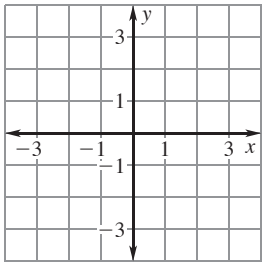
7. $4y = 5x$



8. $-3x = 10y$

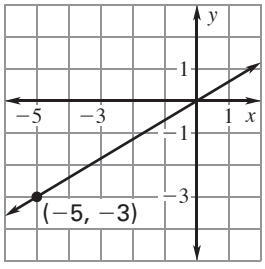


9. $y - 2.25x = 0$



The graph of a direct variation equation is shown. Write the direct variation equation. Then find the value of *y* when *x* = 10.

10.



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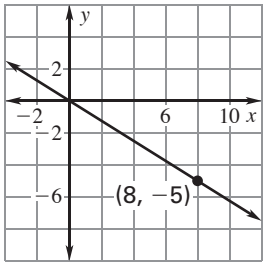

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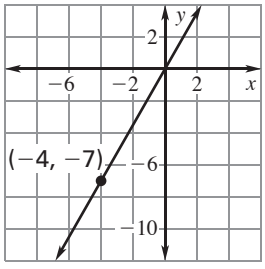

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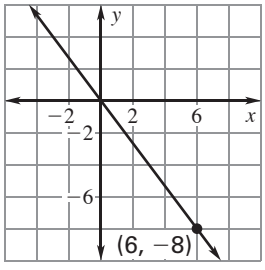

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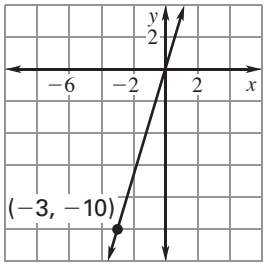

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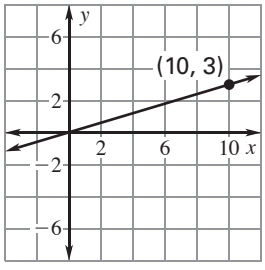

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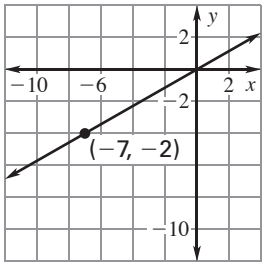

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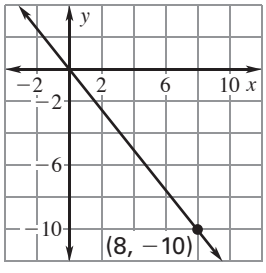

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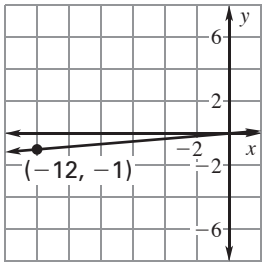

Name _____ Date _____

LESSON 3.6

Practice C *continued*

For use with the lesson "Model Direct Variation"

Tell whether the table represents direct variation. If so, write the direct variation equation.

19.

x	1	2	3	4	6
y	6	12	18	24	36

20.

x	−4	−2	2	4	6
y	14	7	−7	−14	−21

21.

x	8	−4	96	0.4	0.8
y	6	−12	0.5	120	40

22.

x	−32	80	−48	8	24
y	−2	5	−3	0.5	1.5

Given that y varies directly with x, use the specified values to write a direct variation equation that relates x and y.

23. $x = 13, y = 26$

24. $x = 45, y = -9$

25. $x = \frac{1}{5}, y = -1$

26. $x = \frac{3}{4}, y = 2$

27. $x = 1.5, y = -4.5$

28. $x = -3.6, y = -1.2$

29. $x = 27, y = -3$

30. $x = 10, y = 4$

31. $x = -2, y = -9$

32. $x = 8, y = -3$

33. $x = -10, y = -2$

34. $x = 32, y = -4$

35. The slope of a line is 5 and the point (−4, 11) lies on the line. Use the formula for the slope of a line to determine if the equation of the line is a direct variation equation.

36. **Landscape Lighting** To use low-voltage lighting, you need a transformer to control the flow of electricity. The table shows the size s of the transformer (in watts) needed for the number n of 12-watt lights you want to use.

Transformer size, s (watts)	48	72	96
Number of lights, n	4	6	8

a. *Explain* why s varies directly with n.

b. Write a direct variation equation that relates s and n.

c. How many 12-watt lights can you install using a 225-watt transformer?

d. You want to install fifteen 12-watt lights. You have a choice of a 100-watt transformer or a 200-watt transformer. Which transformer should you get? *Explain* your reasoning.

37. **Retail Sales** The sales tax s (in dollars) on an item varies directly with the price p (in dollars) of an item. There is $5.60 in sales tax on an item that costs $80.

a. Write a direct variation equation that relates s and p.

b. The price p (in dollars) of an item varies directly with its sale price d (in dollars). The price of an item that costs $80 is on sale for $50. Write a direct variation equation that relates p and d.

c. Show that the sales tax on an item varies directly with the sale price of the item.