Name _____ Date _____

LESSON 4.7

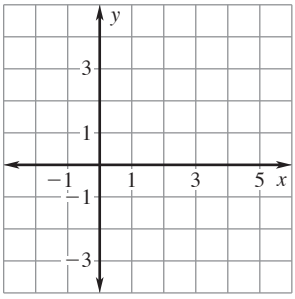
Practice B

For use with the lesson "Predict with Linear Models"

Make a scatter plot of the data. Find the equation of the best-fitting line. Approximate the value of y for $x = 3$.

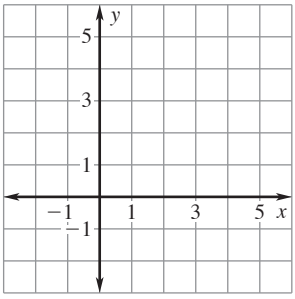
1.

x	-1	0	1	2	4
y	3	3	1	0	-3



2.

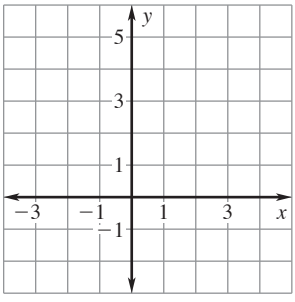
x	-1	0	1	2	4
y	-1	1	2	1	5



Make a scatter plot of the data. Find the equation of the best-fitting line. Approximate the value of y for $x = 5$.

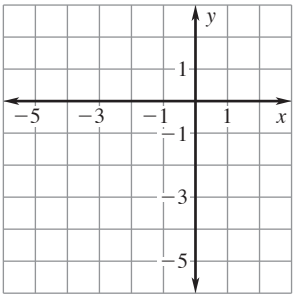
3.

x	-1	0	1	2	3
y	5	3	2	0	-2



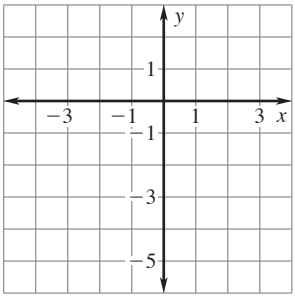
4.

x	-5	-3	-1	1	2
y	-4	-2	-1	1	0



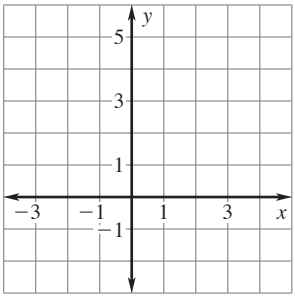
5.

x	-2	-1	0	1	2
y	-4	-2	-1	-1	1



6.

x	-1	0	1	2	3
y	-2	0	1	3	5



Name _____ Date _____

LESSON 4.7

Practice B *continued*

For use with the lesson "Predict with Linear Models"

Find the zero of the function.

7. $f(x) = 16x - 4$

8. $f(x) = 2 - 4x$

9. $f(x) = 0.5x + 5$

10. $f(x) = -0.1x - 3$

11. $f(x) = \frac{3}{4}x - 3$

12. $f(x) = -\frac{2}{5}x + 4$

13. $f(x) = 0.25x + 0.5$

14. $f(x) = 9 - 0.7x$

15. $f(x) = 1.2x + 10$

16. $f(x) = \frac{1}{2}x - 6$

17. $f(x) = -\frac{2}{5}x - 4$

18. $f(x) = -0.8x + 15$

19. $f(x) = 1.25x - 5$

20. $f(x) = 6 - 0.2x$

21. $f(x) = 2.5x - 3$

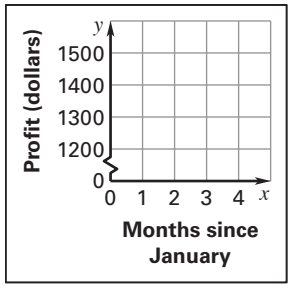
22. **Profit** The table shows the monthly profit of a small company.

Month	January	February	March	April	May
Profit (dollars)	1200	1250	1400	1380	1450

a. Make a scatter plot of the data. Let x represent the number of months since January and let y represent the profit.

b. Find an equation that models the profit (in dollars) as a function of the number of months since January.

c. Approximate the profit in August.



23. **Escape Velocity** The table shows several planet diameters and escape velocities. The escape velocity is the velocity at which an object has to travel in order to escape the effect of a planet's gravity.

Planet	Mercury	Uranus	Earth	Mars	Venus
Diameter (km)	4879	51,118	12,756	6794	12,104
Escape velocity (km/sec)	4.3	21.3	11.186	5.03	10.36

a. Make a scatter plot of the data. Let x represent the diameter of the planet and let y represent the escape velocity.

b. Find an equation that models the escape velocity (in kilometers per second) as a function of the diameter (in kilometers).

c. Approximate the escape velocity of Neptune, which has a diameter of 49,528 kilometers.