Algebra I | LESSON 3-3

Activities, Games, and Puzzles

$y = x + 1$ $y = 0.5x$ $y = 2x - 1$ $y = -3x$

$y = -x - \dfrac{3}{2}$ $y = 2$ $y = x + 3$ $y = -x$
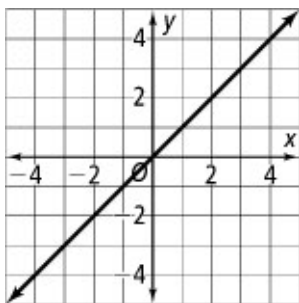
$y = \dfrac{1}{4}x - 1$ $y = -x + 2$ $y = -1$ $y = \dfrac{1}{3}x + 1$

Additional Vocabulary Support

1.

2. A family of functions is a group of functions with common characteristics. A parent function is the simplest function with these characteristics.

3. $y = mx + b$
$y = 3x + 4$

4. y-coordinate of a point where the graph crosses the y-axis

Enrichment

Week	Jenny	Julie	Jolie	Jada
0	25	15	15	25
1	33	20	23	30
2	41	25	31	35
3	49	30	39	40
4	57	35	47	45
5	65	40	55	50
6	73	45	63	55

1.

2.
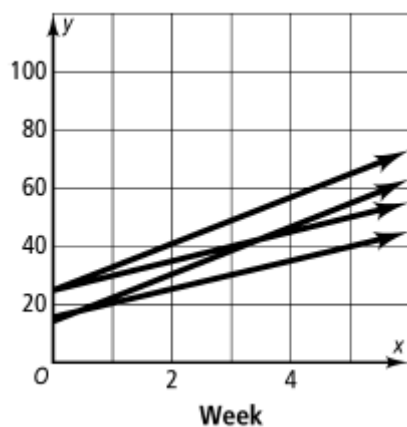
Week

3. Jenny: 8, 25;
Jolie: 8, 15;
Julie: 5, 15;
Jada: 5, 25

4. Jenny: $y = 8x + 25$;
Jolie: $y = 8x + 15$;
Julie: $y = 5x + 15$
Jada: $y = 5x + 25$

5. Jenny: 49, 81;
Jolie: 39, 71;
Julie: 30, 50;
Jada: 40, 60

6. no; the slopes are the same and Jolie starts with less.

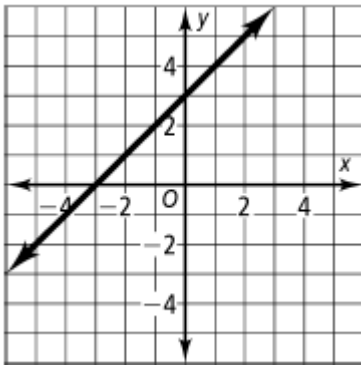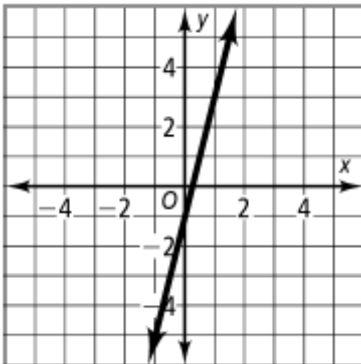**7.** yes; Jolie saves more than Jada each week and by week 4, Jolie has more.

Practice Form G

1. $3; -5$
2. $-5; 13$
3. $-1; -1$
4. $-11; 6$
5. $0; -5$
6. $\dfrac{1}{2}; 6$
7. $-6.75; 8.54$
8. $-\dfrac{2}{3}; -\dfrac{1}{9}$
9. $0; 2.25$
10. $y = -x + 3$
11. $y = 4x - 2$
12. $y = -5x - 8$
13. $y = 0.25x + 6$
14. $y = -11$
15. $y = x + \dfrac{3}{8}$
16. $y = 2x + 1$
17. $y = -5$
18. $y = -\dfrac{1}{2}x + 4$
19. $y = \dfrac{1}{3}x + 4$
20. $y = \dfrac{4}{3}x + \dfrac{10}{3}$
21. $y = x + 4$
22. $y = -\dfrac{1}{2}x + \dfrac{3}{2}$
23. $y = \dfrac{1}{3}x - \dfrac{4}{3}$
24. $y = \dfrac{7}{5}x - 1$
25. $y = -x + 5$
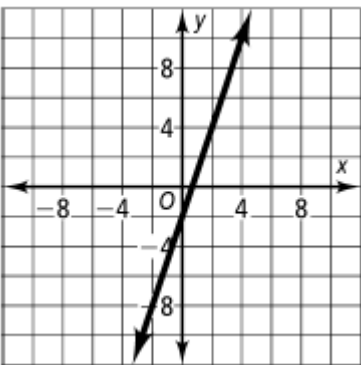26. $y = x + 1$
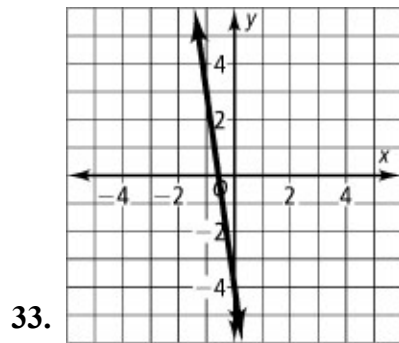27. $y = \dfrac{2}{5}x + \dfrac{36}{5}$

28.

29.
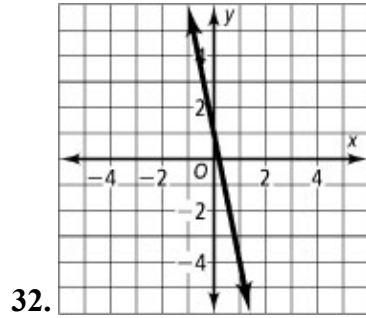
30.

31.

32.

33.

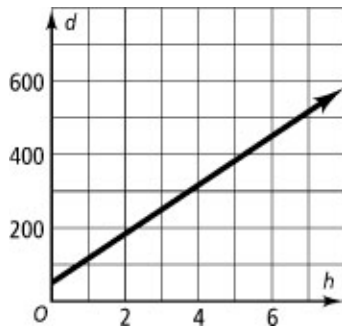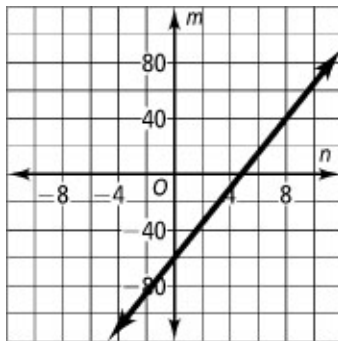**34.** $d = 65h + 40$

35. $m = 13h - 65$
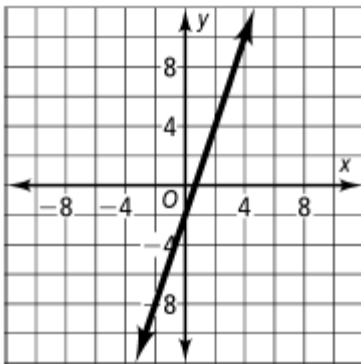
36. $m = -6; b = -4$

37. $m = -\dfrac{1}{2}; b = -4$

38. $m = 4; b = -2$

39. $m = \dfrac{1}{3}; b = 2$

40. $m = \dfrac{2}{5}; b = 0$

41. $m = 2a; b = -3a$

Practice Form K

1. $m = -2; b = 7$
2. $m = 6; b = 11$
3. $m = -7; b = -8$
4. $m = -2.75; b = 3.2$
5. $m = 0; b = -9$
6. $m = \dfrac{1}{4}; b = -\dfrac{2}{7}$
7. $y = -5x - 6$
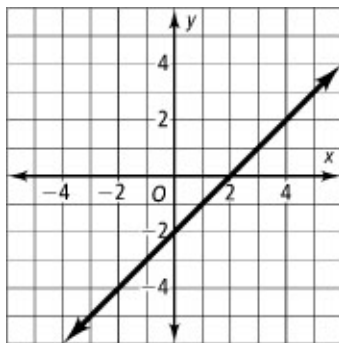8. $y = x - 4$
9. $y = 0.4x - 9$
10. $y = 3$
11. $y = 2x + 1$
12. $y = -1$
13. $y = -2x$
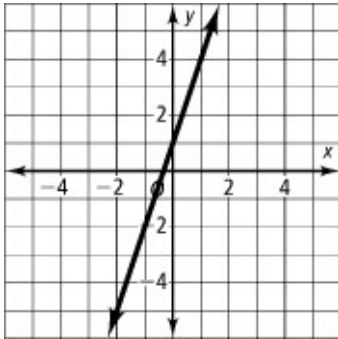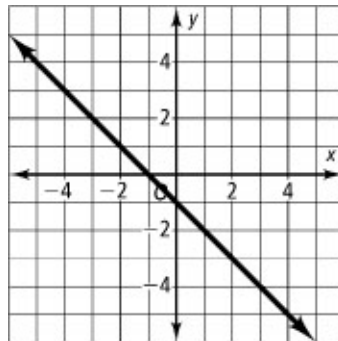14. $y = -x + 7$
15. $y = -\dfrac{1}{2}x + 16$
16. $y = -2x - 9$

17.

18.

19.

20.

21.
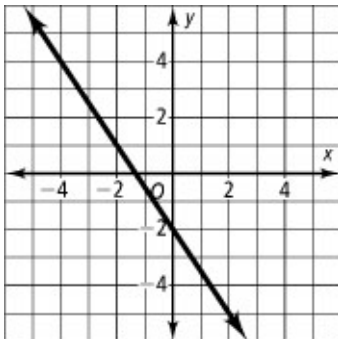
22.
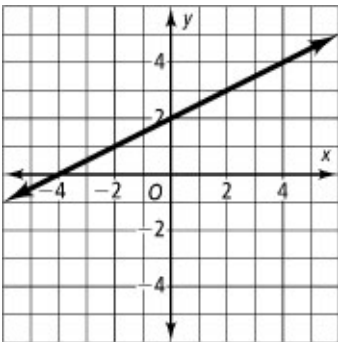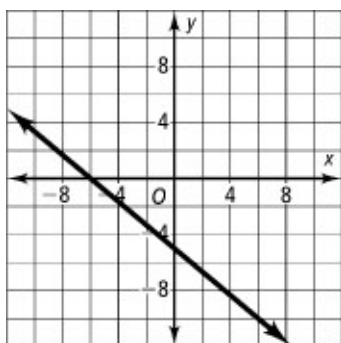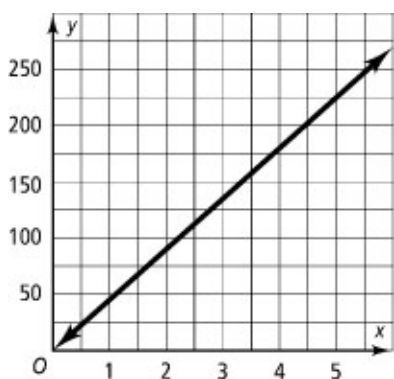
23. $d = 45h$

Reteaching

1. $m = \dfrac{1}{2}; b = 7$

2. $m = -5; b = 1$

3. $m = -\dfrac{2}{5}; b = -3$

4. $m = 1; b = 5$

5. $m = \dfrac{1}{6}; b = -2$

6. $m = 4; b = 0$

7. $y = -3x + 7$

8. $y = \dfrac{2}{3}x + 8$

9. $y = 4x - 3$

10. $y = -\dfrac{1}{5}x - 1$

11. $y = -\dfrac{5}{6}x$

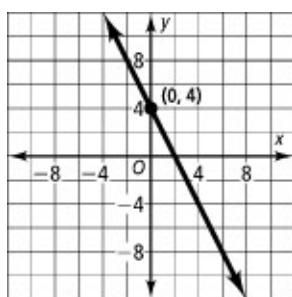12. $y = 7x - 2$
13. $y = 2x + 1$
14. $y = \dfrac{1}{2}x - 2$
15. $y = -3x + 5$
16. $y = x - 6$
17. $y = \dfrac{2}{3}x + 1$
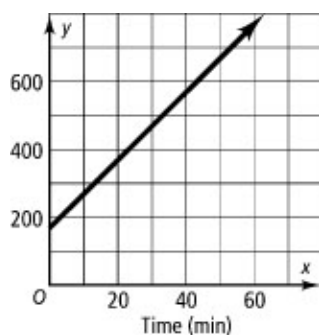18. $y = -\dfrac{1}{4}x - 2$
19. **a.** 4

   b.

   c. -2
   d. Answers may vary. Sample: (1, 2)
   e. See graph in part (b).

Think About a Plan

1. yes; the rate of change (10 pieces/min) is constant.
2. 175; the *y*-intercept
3. number of pieces placed and change in time; 10
4. $y = 175 + 10x$

5.

6. 675 pieces