5. Number of pounds and the total cost; as the number of pounds increases, the total cost goes up, at first quickly then more slowly.

6. Time, grass height; the grass grows and you cut it, then it grows again and you cut it. This is repeated three times.

7. Area painted, paint in can; the more you paint, the less paint left in the can. You are using the paint at a constant rate.

8. C

9. A

10. B

11. Answers may vary. Sample:

12. Answers may vary. Sample:

13. Answers may vary. Sample:

14. Answers may vary. Sample:

The quantities that vary are time and the volume of water in the tube. As time passes, the volume of water in the tube slowly increases until the tube tips over and the volume quickly decreases. As the tube empties, it moves back to an upright position and the volume of water begins to slowly increase again.

15. The graph shown represents the relationship between the number of shirts and the cost per shirt, not the total cost.

16. Check students’ work.

17. No, the graphs are not the same. Your speed on the ski lift going up the slope is constant. Your speed skiing down the slope is not constant.

17a.

17b.

18. No, the graph is not reasonable. The speed would decrease as you ride uphill.

18a.

18b.

19. The blue runner finishes first, the green runner finishes second, and the red runner finishes last. The three runners start at the same time. At time A, the red runner has a fast start, and the other two are a little slower. At time B, the blue runner passes the red runner and goes on to win at time C. At time C, the green runner catches up to the original first place runner to finish second.

20.

21. B
23. 10%; $10.29; $11.32

24. {−3, −1, 1, 3, 4, 5, 7, 9}

25. {1}

26. {−1, 1, 3, 4, 5, 7, 9, 12}

27. {1, 4}

28. | Connie’s Age | Donald’s Age |
   | 0   | 4  |
   | 1   | 5  |
   | 2   | 6  |
   | 3   | 7  |

   \[ d = c + 4 \]

29. | Time (hours) | Number of Cards |
   | 0   | 0  |
   | 1   | 3  |
   | 2   | 6  |
   | 3   | 9  |

   \[ c = 5h \]