3. $y = \frac{1}{5}x$; The tip increases $0.20 for each dollar spent on the meal.

4. $y = -\frac{1}{30}x + 12$; The fuel decreases $\frac{1}{30}$ gallon for every mile driven.

5. $y = 50x + 100$; The balance increases $50 each week.

6. $y = \frac{3}{2}x$; The height increases 1.5 feet each year.

7. $y = 55x$; The number of words increases by 55 each minute.

8. $y = -60x + 480$; The volume decreases 60 cubic feet per hour.

9. Greenville Journal; 5 lines

10. **a.** $y - 212 = \frac{9}{5}(x - 100)$ or $y = \frac{9}{5}x + 32$
    b. 71.6°F
    c. $y = \frac{5}{9}(x - 32)$
    d. about 28.33°C

26. **a.** $-\frac{5}{4}$; the decrease in balance per month
    b. domain: $0 \le x \le 24$, range: $0 \le y \le 3000$; The domain represents the term of the balance of the loan from start to finish, and the range represents the balance of the loan.
    c. $1500

28. *Sample answer:* A: $(0, 4)$, B: $(4, 0)$, C: $(0, 0)$; line connecting A and C: $x = 0$; line connecting B and C: $y = 0$

30. D

31. about 2.2 mi