Answer Presentation Tool

Book [Algebra 2   ▾]   Chapter [1   ▾]

Section [3 - Exercises   ▾]

Exercises [1, 2, 3-25 odd, 32, 34, 38]   (38 exercises)

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1. slope-intercept

2. It is negative.

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

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

7. From the graph, the slope is $m = \dfrac{165 - 55}{3 - 1} = \dfrac{110}{2} = 55$

and the y-intercept is $b = 0$. Using slope-intercept form, an equation of the line is

$y = mx + b$

$y = 55x + 0.$

The equation is $y = 55x$. The slope indicates that the typing rate is 55 words per minute.

9. Greenville Journal; 5 lines

11. The original balance of $100 should have been included; After 10 years, the increase in balance will be $70, resulting in a new balance of $170.

13. yes; *Sample answer:* $y = 4.25x + 1.75$; $y = 65.5$; After 15 minutes, you have burned 65.5 calories.

15. yes; *Sample answer:* $y = -4.6x + 96$; $y = 27$; After 15 hours, the battery will have 27% of life remaining.

17. $y = 380.0x + 11{,}290$; $16{,}990$; The annual tuition increases about $380 each year and the cost of tuition in 2005 is about $11{,}290.

19. $y = 0.42x + 1.44$; $r = 0.61$; weak positive correlation

21. $y = -0.45x + 4.26$; $r = -0.67$; weak negative correlation

23. $y = 0.61x + 0.10$; $r = 0.95$; strong positive correlation

25. **a.** *Sample answer:* height and weight; temperature and ice cream sales; Correlation is positive because as the first goes up, so does the second.

    b. *Sample answer:* miles driven and gas remaining; hours used and battery life remaining; Correlation is negative because as the first goes up, the second goes down.

    c. *Sample answer:* age and length of hair; typing speed and shoe size; There is no relationship between the first and second.

32. **a.** yes; If a country has a high number of personal computers per capita, it indicates wealth and a high quality of life which would also indicate that the country would have a health care system and, therefore, a higher life expectancy.

    b. no; The high life expectancy is not caused by the computers. Both are benefits of the wealth of a country. This is an example of how correlation does not imply causation.

34. $\left(\frac{1}{2}, 0\right)$

$(2,)$

38. $(6, 2)$