

1.
 - a. 16.875 ounces
 - b. slope = 0.035. For each additional page, the predicted weight of the book increases by 0.035 ounces.
 - c. y -intercept = 2. A book with 0 pages is predicted to weigh 2 ounces by the model. In other words, the binding of the book is predicted to weigh approximately 2 ounces.

2.
 - a. About 90. A student with zero absences is predicted to earn a score of 90 on the final exam.
 - b. For each additional absence, the student's final exam score is predicted to decrease by 2.75 points.
 - c. About 79.
 - d. Better than the predicted score. The point (5, 80) is above the regression line, so the actual score is higher than the predicted score. In addition, the predicted score is $90 - 2.75(5) = 76.25$, which is less than 80.

3. The residual is -240 pounds. The actual weight of the polar bear was 240 pounds less than the weight predicted by the model for a height of 12 feet.

4.
 - a. \$3,268
 - b. \$57,859
 - c. \$82,039
 - d. The prediction for 10 years is more trustworthy because 10 years is within the range of experience values used to create the linear regression model. Thirty years is outside of the range of experience values, so we don't know if the linear trend will continue for that many years. This is extrapolation.

5. A

6. B