

4.5**Practice A**

In Exercises 1 and 2, use residuals to determine whether the model is a good fit for the data in the table. Explain.

1. $y = \frac{7}{2}x - 8$

x	-4	-3	-2	-1	0	1	2	3	4
y	-21	-19	-15	-12	-8	-4	-1	2	6

2. $y = -4x + 27$

x	1	2	3	4	5	6	7	8	9
y	24	22	19	18	15	11	9	6	5

In Exercises 3 and 4, use a graphing calculator to find an equation of the line of best fit for the data. Identify and interpret the correlation coefficient.

3.

x	1	2	3	4	5	6	7	8	9
y	-7	-4	-1	0	0	1	4	7	9

4.

x	-5	-3	-1	1	3	5	7	9	11
y	20	18	15	14	12	9	7	4	2

5. The table shows the number of people x in a room and the temperature in the room in degrees Fahrenheit, y .

x	0	1	2	3	4	5	6	7	8
y	76	76	77	77	78	79	79	80	82

- Use a graphing calculator to find an equation of the line of best fit.
- Identify and interpret the correlation coefficient.
- Interpret the slope and y -intercept of the line of best fit.
- Approximate the temperature when 15 people are in the room.

4.5 Practice B

In Exercises 1 and 2, use residuals to determine whether the model is a good fit for the data in the table. Explain.

1. $y = \frac{3}{2}x - 10$

x	2	4	6	8	10	12	14	16	18
y	-1	-1	1	2	5	6	8	10	14

2. $y = -2x + 56$

x	1	2	3	4	5	6	7	8	9
y	52	50	48	47	45	42	41	38	35

In Exercises 3 and 4, use a graphing calculator to find an equation of the line of best fit for the data. Identify and interpret the correlation coefficient.

3.

x	-12	-8	-4	0	4	8	12	16	20
y	48	42	37	31	29	24	19	14	7

4.

x	3	4	5	6	7	8	9	10	11
y	20	36	15	32	12	28	17	16	24

5. The table shows the average number of minutes y per kilometer for runners and the total distance of a running race, x (in kilometers).

x	3.1	6.2	9.3	12.4	15.5	18.6	21.7	24.8	27.9
y	5.4	5.6	5.7	5.9	6.0	6.1	6.3	6.5	6.9

- Use a graphing calculator to find an equation of the line of best fit.
- Identify and interpret the correlation coefficient.
- Interpret the slope and y -intercept of the line of best fit.
- Approximate the average number of minutes per kilometer when the distance of a race is 31 kilometers.