Name _____ Date _____

1.3 Practice A

In Exercises 1 and 2, use the graph to write an equation of the line and interpret the slope.

1.

Hotel Stay

2.

Soap in Bottle
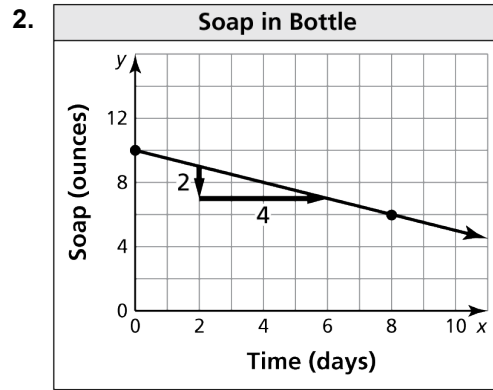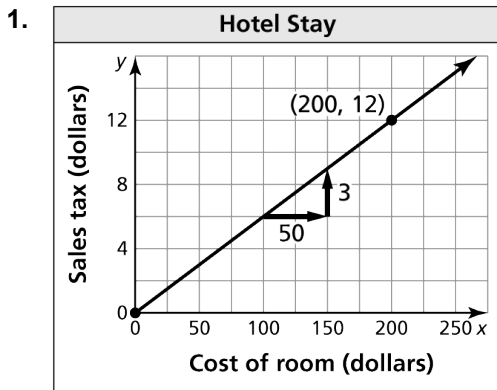
3. Two car washes charge a basic fee plus a fee based on the number of extras that are chosen. The table below shows the total costs for different car washes at Bubbles Car Wash. The total cost y (in dollars) for a car wash with x extras at Soapy Car Wash is represented by the equation $y = x + 9$. Which car wash charges more for the basic fee? How many extras must be chosen for the total costs to be the same?

Number of extras, x	2	4	6	8
Total cost, y	9	12	15	18

In Exercises 4 and 5, determine whether the data show a linear relationship. If so, write an equation of a line of fit. Estimate y when $x = 15$ and explain its meaning in the context of the situation.

4.

Weeks, x	3	6	10	12	16
Height of basil plant (inches), y	1	2	5	9	15

5.
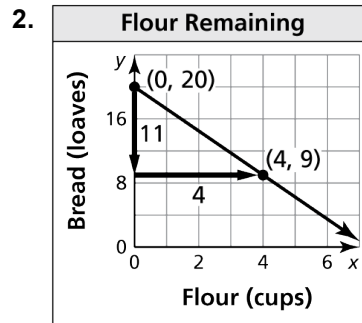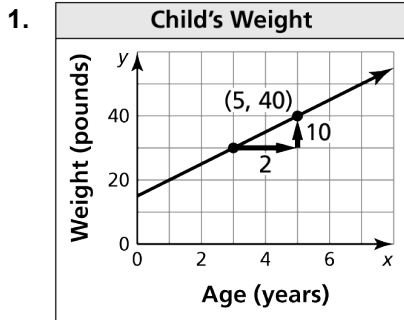
Minutes, x	6	10	14	20	24
Cars washed, y	3	5	7	10	12

6. A set of data points has a correlation coefficient $r = -0.86$. Your friend claims that because the correlation coefficient is close to -1, it is reasonable to use the line of best fit to make predictions. Is your friend correct? Explain your reasoning.

Name _____ Date _____

In Exercises 1 and 2, use the graph to write an equation of the line and interpret the slope.

1.

Child's Weight

Weight (pounds) — Age (years)

(5, 40), 10, 2

2.

Flour Remaining

Bread (loaves) — Flour (cups)

(0, 20), 11, (4, 9), 4

In Exercises 3 and 4, determine whether the data show a linear relationship. If so, write an equation of a line of fit. Estimate y when $x = 15$ and explain its meaning in the context of the situation.

3.

Days, x	3	7	11	14	20
Number of tickets sold, y	76	164	252	318	450

4.

Minutes running, x	6	10	17	25	40
Calories burned, y	70	118	200	295	472

In Exercises 5 and 6, use the linear regression feature on a graphing calculator to find an equation of the line of best fit for the data. Find and interpret the correlation coefficient.

5.

6.