

TEST NAME: **8.SP.1,2,3,4 Review**
TEST ID: **1033963**
GRADE: **08 - Eighth Grade**
SUBJECT: **Mathematics**
TEST CATEGORY: **Shared Classroom Assessments**

04/21/16, 8.SP.1,2,3,4 Review

Student: _____

Class: _____

Date: _____

1. The chart below represents data collected from 10 eighth grade boys showing their height in inches and their weight in pounds.

Height (inches)	60	63	65	61	70	55	58	61	64	57
Weight (pounds)	125	139	155	136	170	108	116	139	129	121

Which statement **best** describes the association between height and weight of the ten boys?

- A. The data shows a negative, linear association.
 - B. The data shows a positive, linear association.
 - C. The data shows a non-linear association.
 - D. The data shows no association.
2. Which data would **most likely** show a negative correlation when graphed on a scatterplot?
- A. address of home and eye color
 - B. favorite color and favorite food
 - C. age of vehicle and value of vehicle
 - D. miles traveled and time spent driving

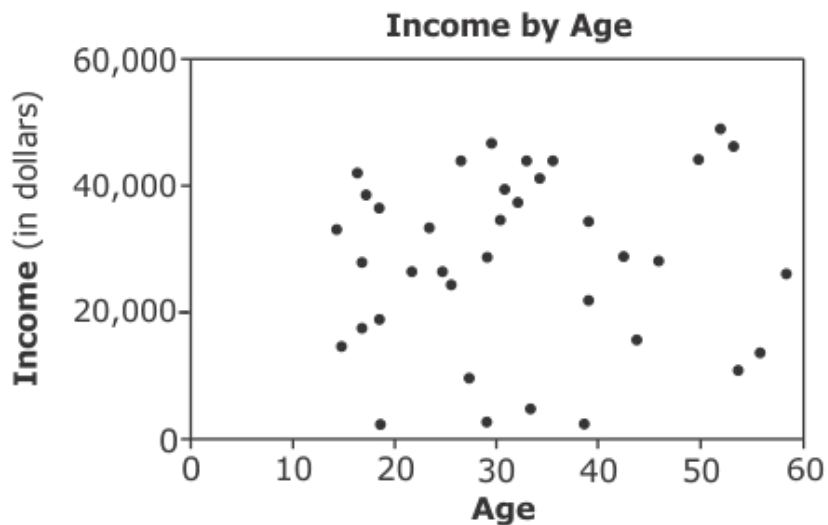
3. Kathleen collected the data below.

x	y
10	44
15	56
20	78
25	98

When graphed, what type of correlation do these data show?

- A. positive
- B. negative
- C. none
- D. irrational

4. The scatterplot below compares yearly income to age.

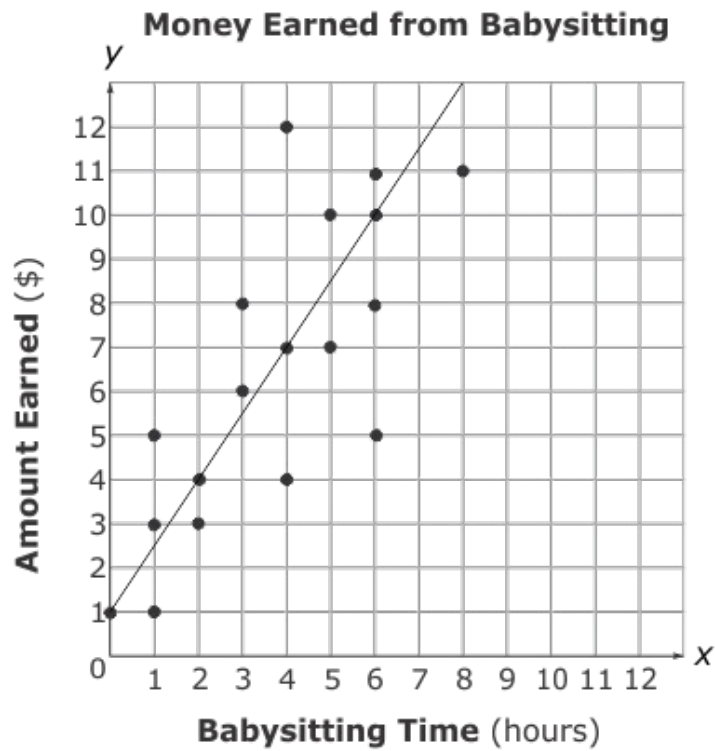


What kind of association is shown?

- A. positive association
- B. negative association
- C. irrational association
- D. no association

5. The points $(0, 3)$, $(-2, -7)$, $(-6, -27)$, $(6, 33)$, $(4, 23)$, $(-1, -2)$ were plotted on the coordinate plane. What type of association do these data have?
- A. positive linear association
 - B. negative linear association
 - C. positive non-linear association
 - D. negative non-linear association
6. Which set of data would **most likely** show no correlation when graphed on a scatterplot?
- A. number of pets and number of siblings
 - B. number of sunny days and umbrella sales
 - C. the age of a tree and the height of the tree
 - D. time spent studying and grades made in class

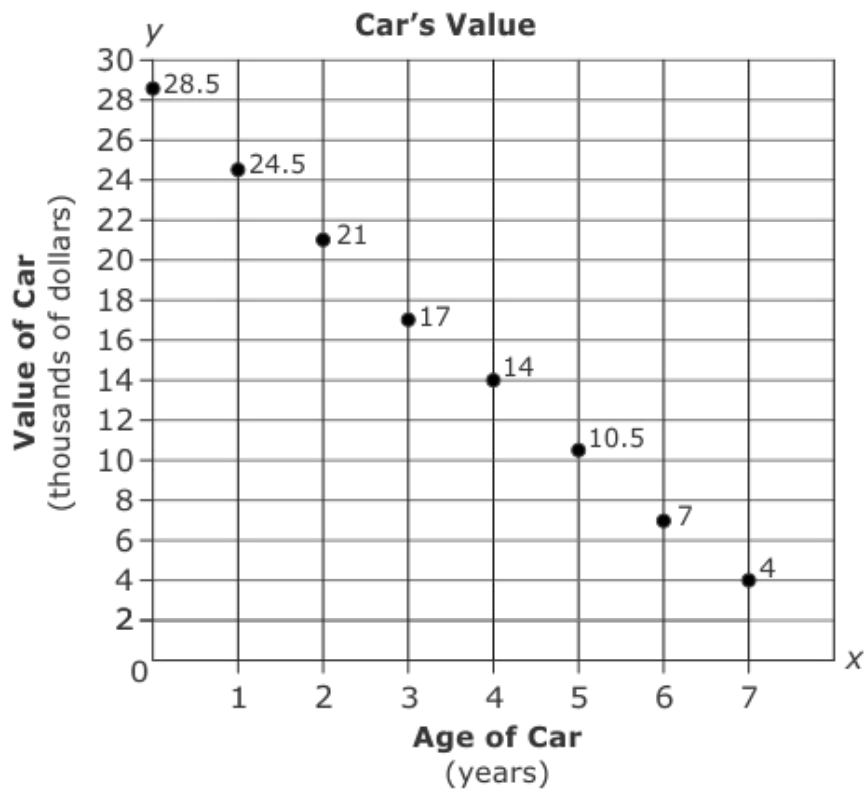
7. The graph shows the amount of money earned by students after several hours of babysitting.



Which equation would **best** fit the data?

- A.
 $y = \frac{3}{2}x + 1$
- B.
 $y = \frac{3}{2}x + 3$
- C.
 $y = \frac{2}{3}x + 1$
- D.
 $y = \frac{2}{3}x + 3$

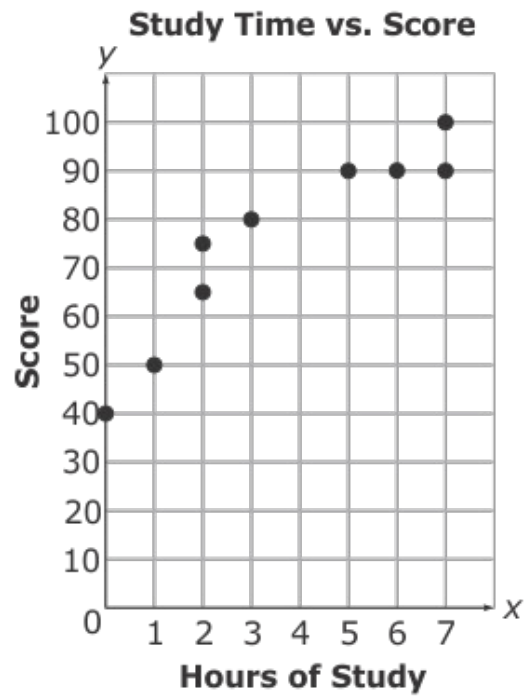
8. The graph below shows the age of a car and its value over several years.



Which equation would **best** fit the data?

- A. $y = 28,500x - 3,500$
- B. $y = 28,500x + 3,500$
- C. $y = 28,500 - 3,500x$
- D. $y = 28,000 + 3,500x$

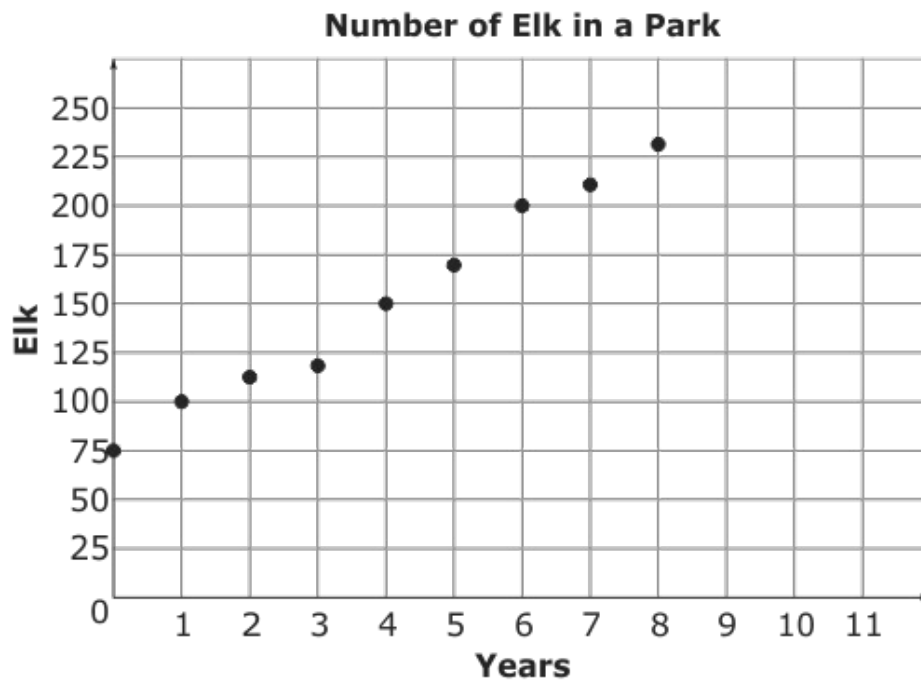
9. The graph below shows the number of hours students studied for a test and the score they received.



Which equation **best** fits the data?

- A. $y = 10x + 50$
- B. $y = 10x - 50$
- C. $y = 50x + 10$
- D. $y = 50x - 10$

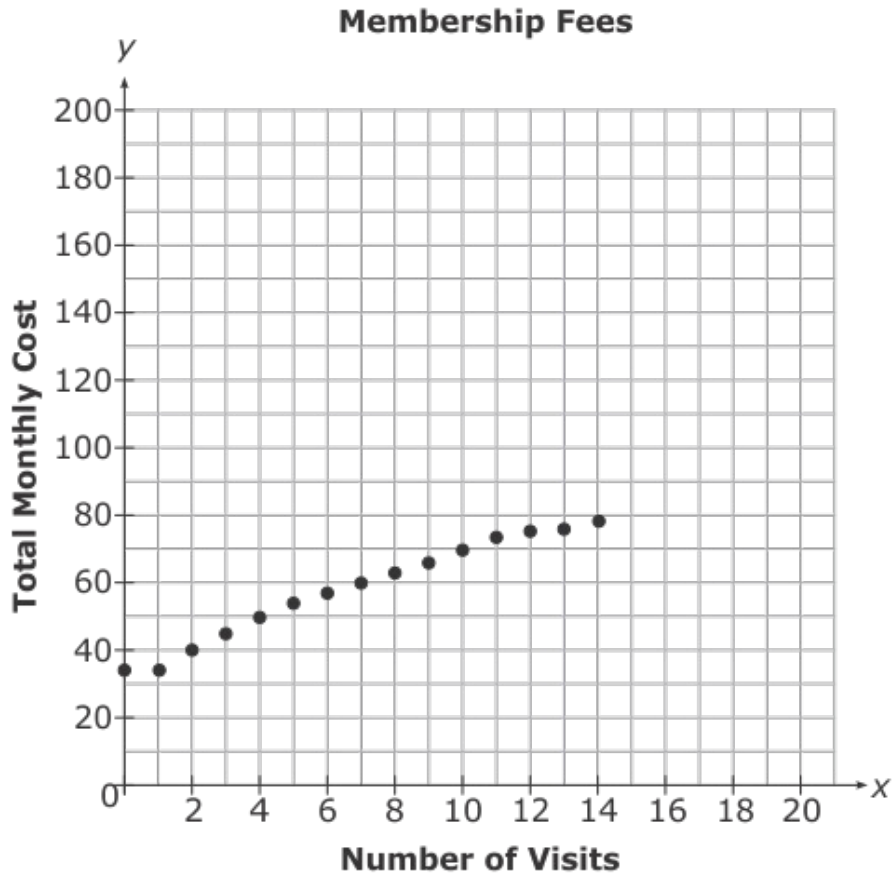
10. The graph shows the number of elk in a national park over several years.



Which equation **best** fits the data?

- A. $y = 75 + 20x$
- B. $y = 75 + 40x$
- C. $y = 75 - 20x$
- D. $y = 75 - 40x$

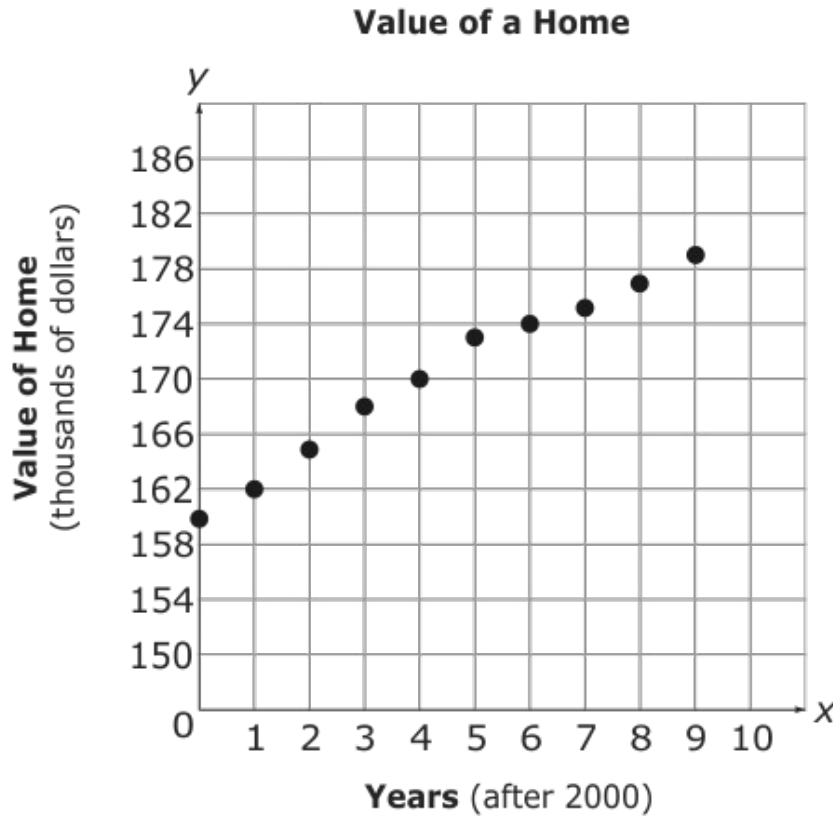
11. A health club charges a monthly membership fee, plus a fee for the number of monthly visits. The graph shows the total monthly cost, y , given the number of monthly visits, x .



Which equation **best** fits this data?

- A. $y = -35x + 3.5$
- B. $y = -3.5x + 35$
- C. $y = 3.5x + 35$
- D. $y = 35x + 3.5$

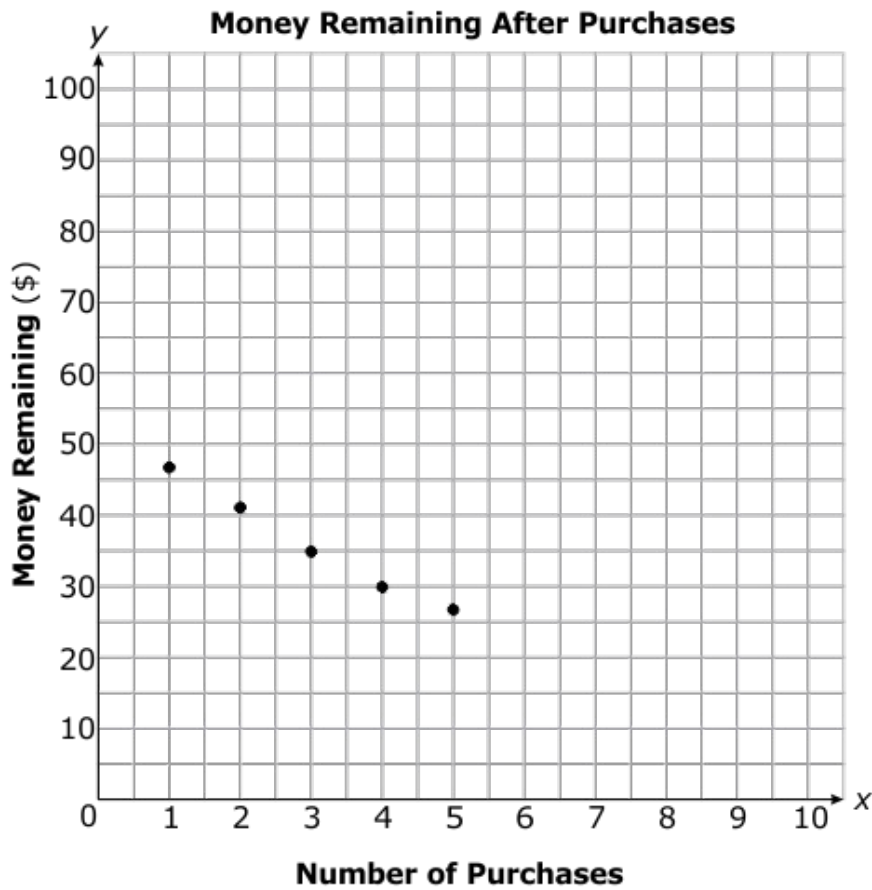
12. The graph below shows the value of a home over 10 years. The graph starts in the year 2000 ($x = 0$) and each x value represents the number of years after 2000.



Which equation would **best** fit the data?

- A. $y = 160,000x + 1$
- B. $y = 160,000x + 2$
- C. $y = x + 160,000$
- D. $y = 2x + 160,000$

13. The graph below shows the amount of money remaining, y , after purchasing x items.



Using a linear model, which equation **best** fits the data?

- A. $y = -3x + 51$
- B. $y = -3x + 45$
- C. $y = -5x + 45$
- D. $y = -5x + 51$

14. The table shows the age and value of a vehicle over several years.

Age of Vehicle (years)	Value (\$)
1	20,000
2	18,500
3	16,000
4	14,500
5	12,000

Which equation would **best** fit the data?

- A. $y = -1,500x + 20,000$
- B. $y = 1,500x + 20,000$
- C. $y = -2,000x + 22,000$
- D. $y = 2,000x + 22,200$
15. The table below shows the cumulative amount of time, in hours, Meghan reads over five weeks.

Number of Weeks	Cumulative Number of Hours Read
1	2
2	5
3	7
4	10
5	13

If the data in the table is graphed, what is the **approximate** slope of a line that best fits the data?

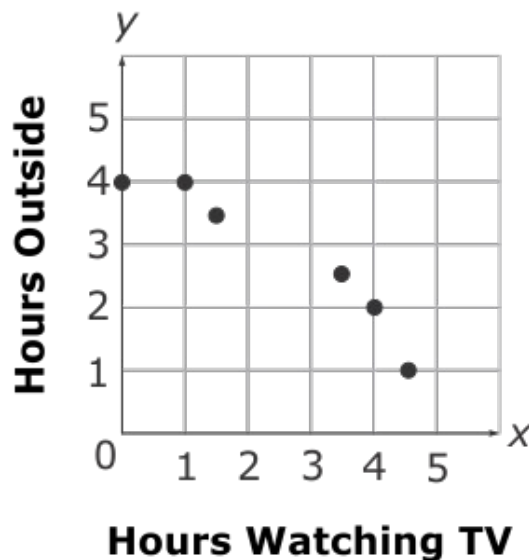
- A. $\frac{2}{5}$
- B. $\frac{1}{2}$
- C. 2
- D. $\frac{5}{2}$

16. The table shows the value of a video game system since introduced in 2003.

Year (since 2003)	0	1	2	3
Value (\$)	700	520	250	120

Which equation **best** fits the data?

- A. $y = -700x + 200$
- B. $y = -200x + 700$
- C. $y = 200x - 700$
- D. $y = 700x - 200$
17. James asked six classmates about the amount of time they spend outside and the amount of time they spend watching TV on Saturday. He plotted the results on the graph below.

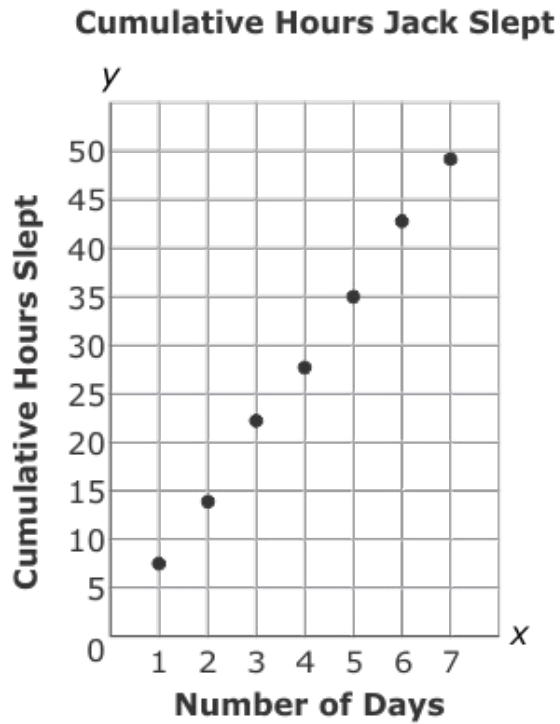


Which is the **best estimate** for the amount of time someone spends outside if he or she watches 2.5 hours of TV?

- A. 1.5 hours
- B. 2 hours
- C. 3 hours
- D. 3.5 hours

18. The line of best fit for a set of data is $y = 0.39x + 45$, where y represents total cost of a utility bill and x represents hours of usage. Using this linear model, what does the slope of the line represent?
- A. The flat fee is \$45 for a utility bill.
 - B. A utility bill will cost \$45.39 each month.
 - C. The cost for each hour of usage is \$45.
 - D. The cost for each hour of usage is \$0.39.
19. The line of best fit for a scatter plot showing the age, x , and value, y , of a car is $y = -1,580x + 17,020$. What does the y -intercept represent?
- A. The age of the car is 2 years.
 - B. The ending value of the car is \$1,580.
 - C. The beginning value of the car is \$17,020.
 - D. The amount of money owed to the bank for the car is \$15,440.

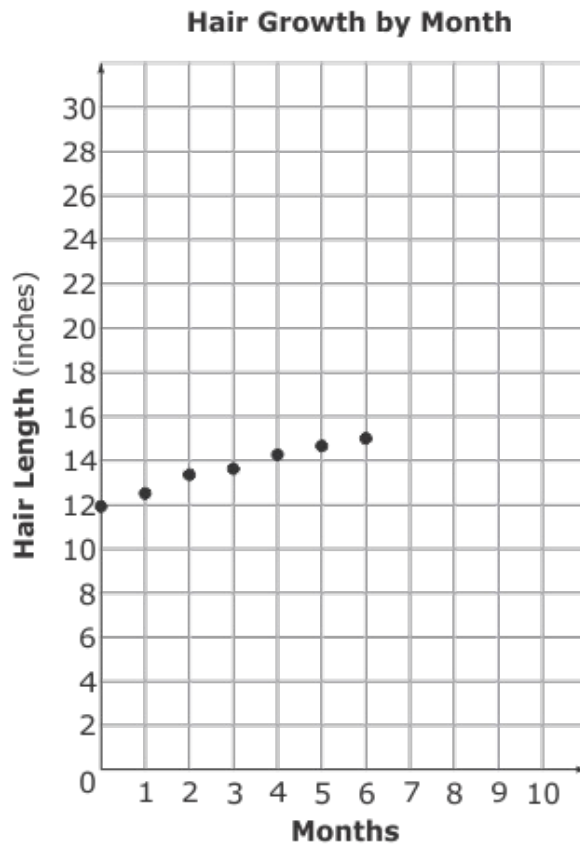
20. The graph below represents the cumulative number of hours Jack slept during a week.



Using a linear model for the data, what is the meaning of the slope?

- A. the amount of hours Jack slept per night
- B. the amount of sleep Jack got the first night
- C. the amount of nights Jack slept per week
- D. the number of hours Jack was awake

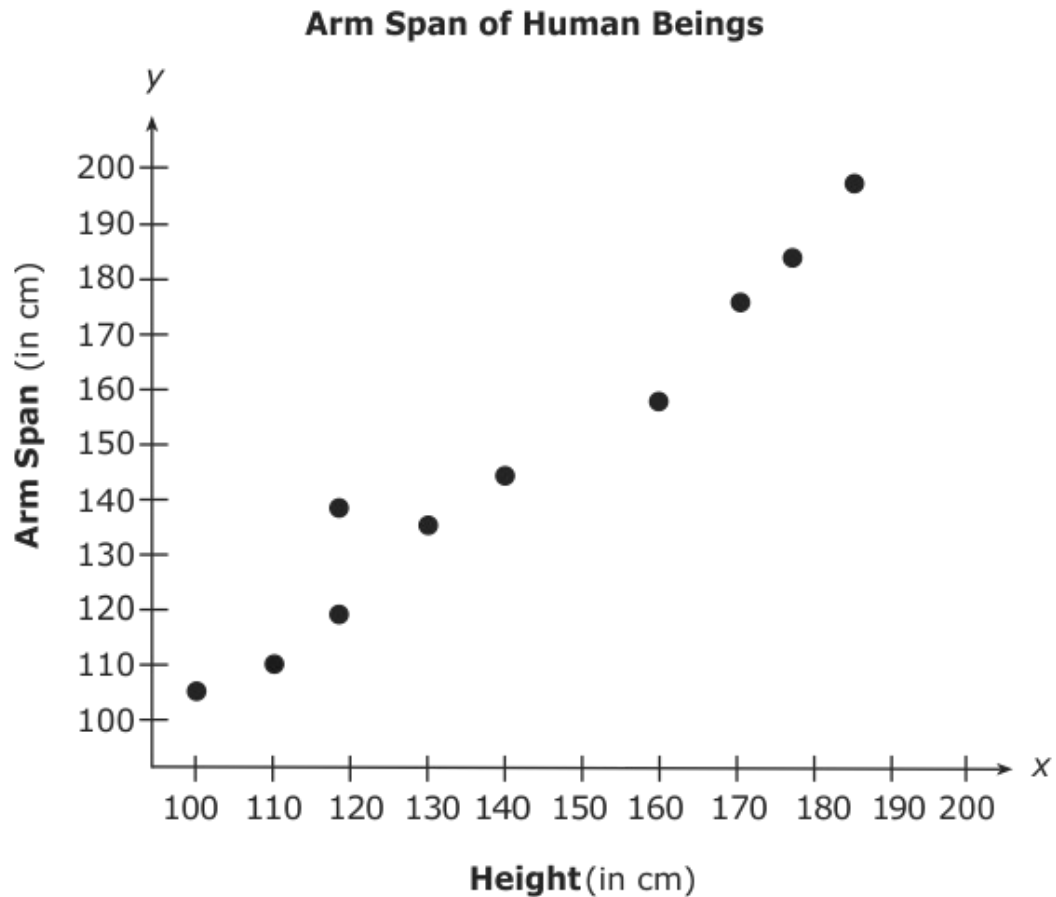
21. Tanya is growing her hair out. She records the length of her hair at the end of each month and plots the data in the graph below. The equation of a line that approximates the data is $y = \frac{1}{2}x + 12$.



Assuming she does not cut her hair, **about** how long can Tanya expect her hair to be after 8 months?

- A. 14 inches
- B. 16 inches
- C. 20 inches
- D. 28 inches

22. Anna measured the heights and arm spans of 10 students in her class. She created the scatterplot below.



Based on the graph, what is the **approximate** arm span of a student who is 150 cm tall?

- A. 130 cm
- B. 150 cm
- C. 170 cm
- D. 190 cm

23. A teacher at an elementary school surveyed 4th and 5th-grade students to determine how many minutes they exercise after school. The results of the survey are shown in the table below.

	0–30 Minutes	31–60 Minutes	More Than 60 Minutes
4th Grade	61	52	29
5th Grade	74	23	16

About what percent of the students exercise More Than 60 Minutes?

- A. 18%
 - B. 21%
 - C. 23%
 - D. 45%
24. A survey asked students at a middle school the number of siblings they have. The results are shown in the table below.

	0 Siblings	1 Sibling	2 Siblings	3 or More Siblings
6th Grade	32	129	98	62
7th Grade	47	92	108	58
8th Grade	23	108	101	64

About what percent of the students had no siblings?

- A. 4%
- B. 5%
- C. 11%
- D. 13%

25. A survey was conducted to determine the number of males and females registered as Democrat, Independent, or Republican. The results are shown in the table below.

	Democrat	Independent	Republican
Females	325	81	270
Males	254	41	285

Based on the table, *approximately* what percentage of those surveyed are male Republicans?

- A. 3%
- B. 20%
- C. 23%
- D. 26%