TEST NAME: **Statistics & Probability EOG Station Review**
TEST ID: **2476021**
GRADE: **08 - Eighth Grade**
SUBJECT: **Mathematics**
TEST CATEGORY: **My Classroom**

Student: _____

Class: _____

Date: _____

1. What type of correlation ***most likely*** occurs between a person's age and the number of his or her siblings?

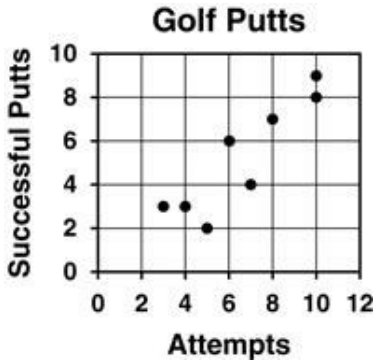
   A. positive correlation

   B. negative correlation

   C. irrational correlation

   D. no correlation

2. **Members of the golf team recorded their putting results on the scatterplot below.**



Which table BEST represents the data recorded?

A.

Attempts	Successful
3	3
10	9
5	2
6	6
4	3
8	7
10	8
7	4

B.

Attempts	Successful
3	3
9	10
2	5
6	6
3	4
7	8
8	10
4	7

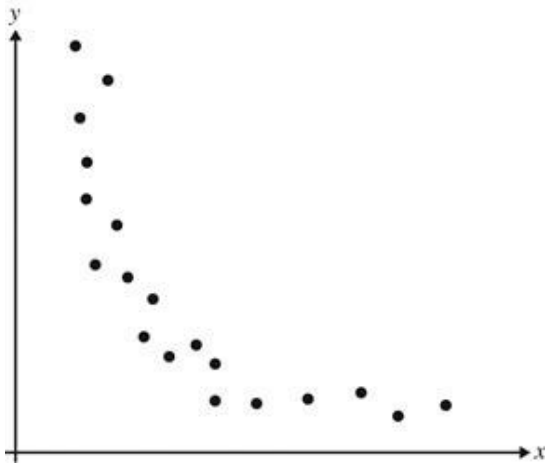
C.

Attempts	Successful
2	2
9	8
5	1
5	5
3	2
7	6
9	7
6	3

D.

Attempts	Successful
4	4
11	10
6	3
7	7
5	4
9	8
11	9
8	5

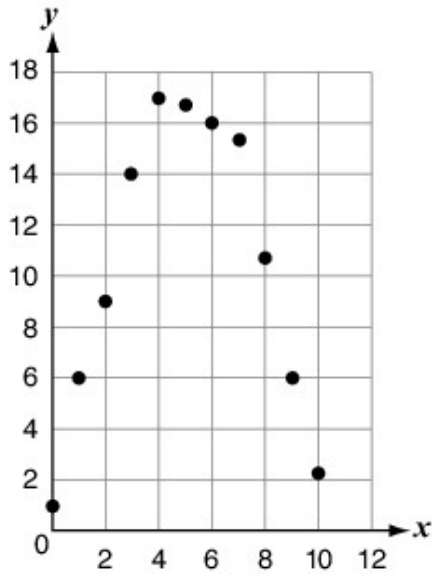
3. **Which is the BEST description of the data shown on this graph?**



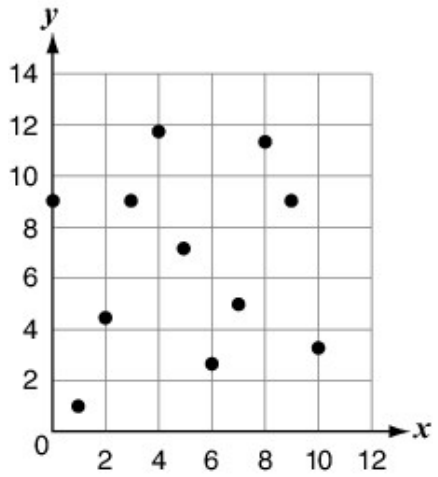
A. nonlinear with a negative trend
B. nonlinear with a positive trend
C. linear with a negative trend
D. linear with a positive trend

4. Which relationship between *x* and *y* in the scatter plots below could be **best** represented with a linear model?

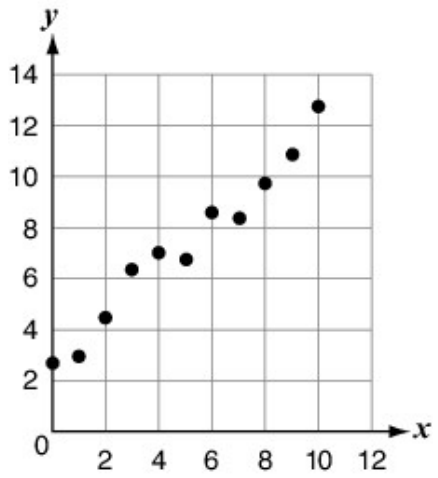
A.



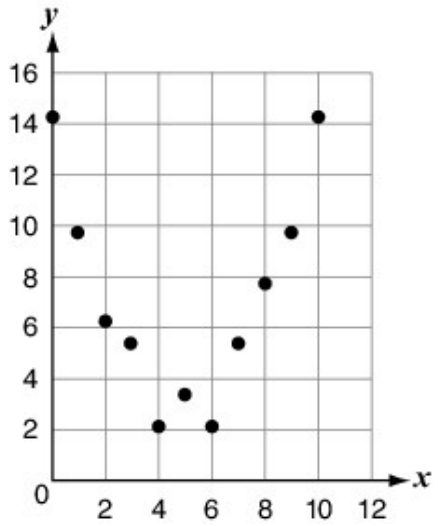
B.


y
14
12
10
8
6
4
2
0
2
4
6
8
10
12
x

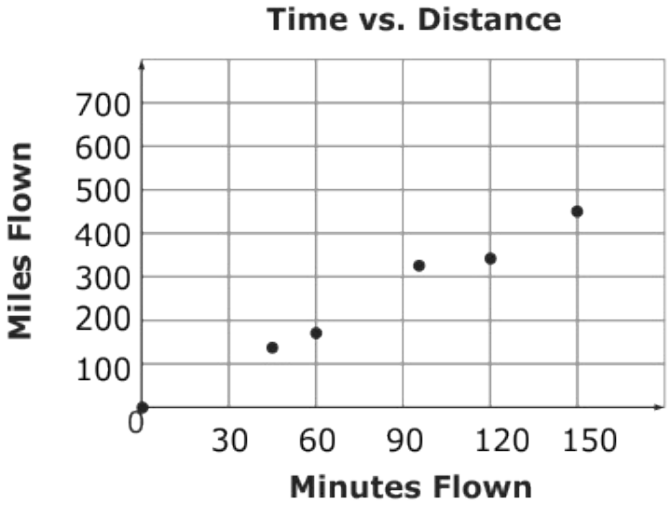
C.


y
14
12
10
8
6
4
2
0
2
4
6
8
10
12
x

D.


y
16
14
12
10
8
6
4
2
0
2
4
6
8
10
12
x

5. The graph below shows the relationship between the number of miles flown in a plane after several minutes.



Which equation ***best*** fits the data?

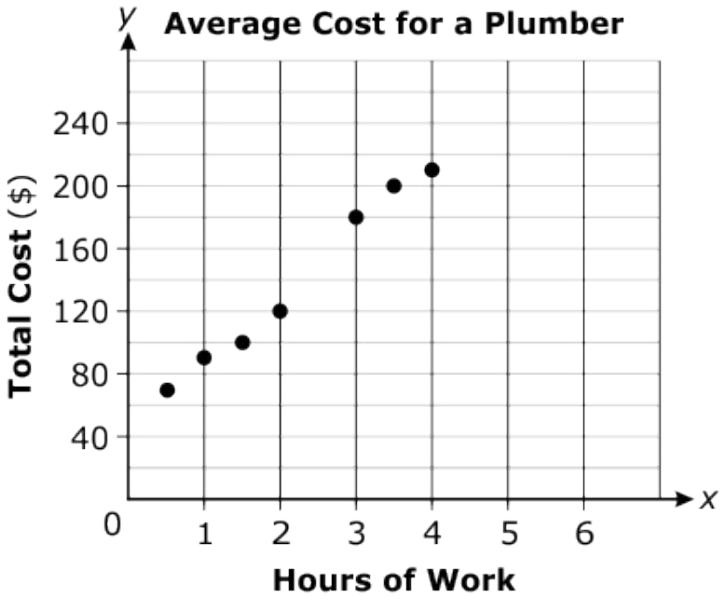
A. $y = 2x$

B. $y = 3x$

C. $y = 30x$

D. $y = 60x$

6. The graph below shows the average cost of plumbers in a city based on the number of hours they work.



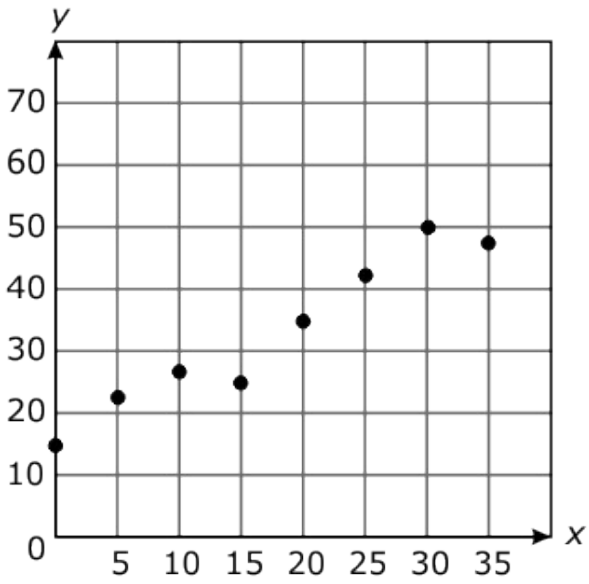
Which equation would ***best*** fit the data?

A. $y = {}^{-}40x + 50$

B. $y = 40x + 50$

C. $y = 40x$

7. Which equation ***best*** fits the data in the scatterplot below?

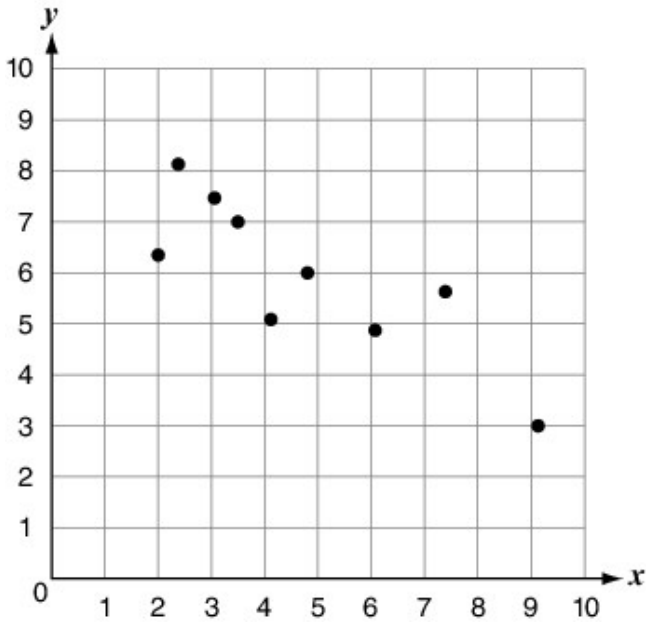


A. $y = x + 15$

B. $y = 4x + 15$

C. $y = 15x$

8. The figure below shows a scatter plot.



Which linear equation **best** represents the data in the scatter plot?

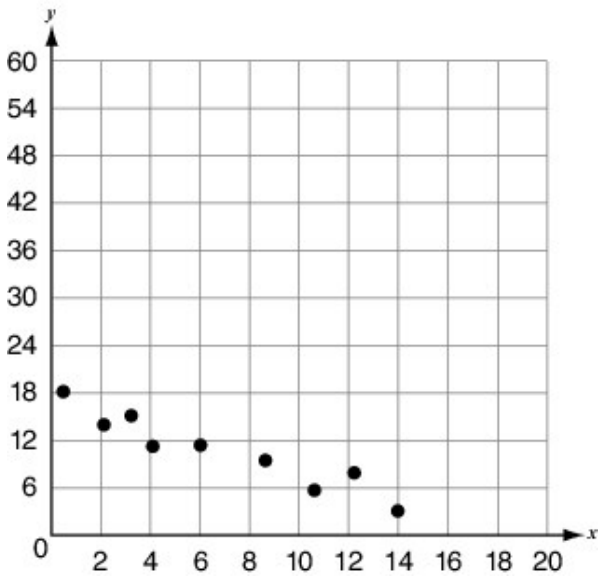
A. $y = -8x + 0.5$

B. $y = -0.5x - 8$

C. $y = -0.5x + 8$

D. $y = -x + 8.5$

9. Penelope constructed the scatter plot below.



Which statement describes the function that would **most** appropriately model the data?

A. a straight line with negative slope

B. a straight line with positive slope

C. a curved line that is increasing

D. a curved line that is decreasing

10. **The engine displacement, in cubic centimeters (cc), and the fuel efficiency, in miles per gallon (mpg), for eight economy cars are given in the table.**

Engine Displacement and Fuel Efficiency for Economy Cars

Car	Displacement (cc)	Fuel Efficiency (mpg)
Q	2189	25
R	1996	29
S	1468	33
T	1324	38
U	1856	26
V	993	43
W	1587	27
X	1590	33

If *x* represents the engine displacement and *y* represents the fuel efficiency, then the equation $y = -0.015x + 55.829$ can be used to model the data in the table. According to the equation, which value is closest to the expected engine displacement, in cubic centimeters, of a car with a fuel efficiency of 40 miles per gallon?

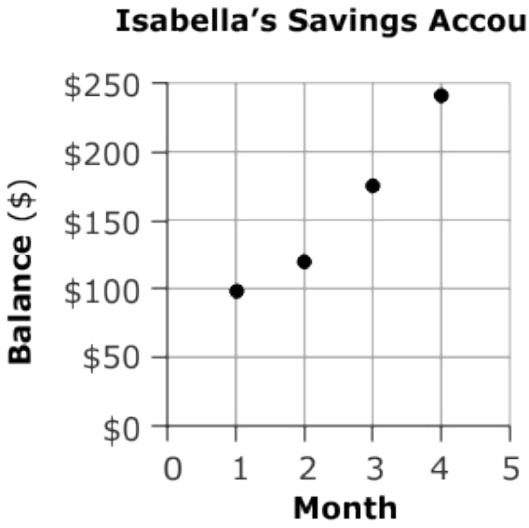
A. 655

B. 1055

C. 5643

D. 6389

11. The graph shows Isabella's savings account over several months.



Using a linear model, what is Isabella's ***approximate*** balance in month 5?

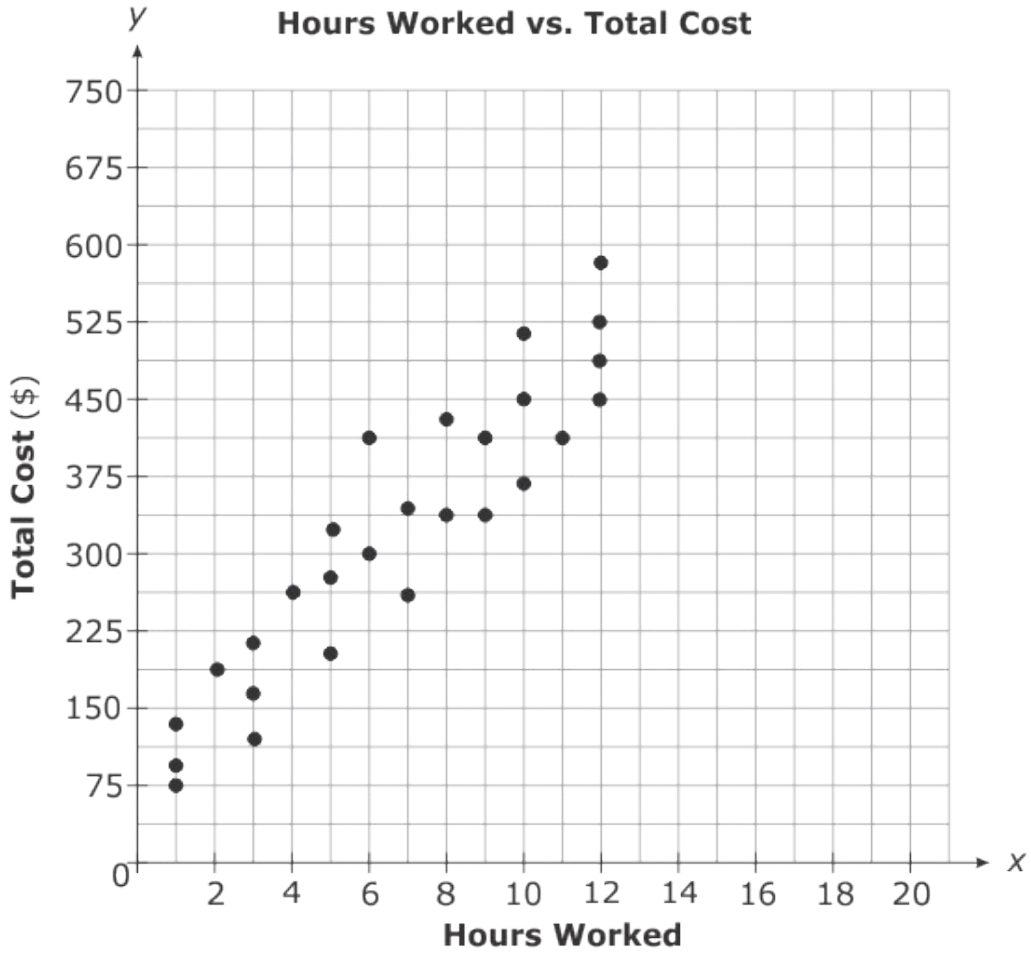
A. $200

B. $250

C. $300

D. $350

12. The scatterplot below represents the relationship between the total cost for plumbing service and the number of hours worked by plumbing companies in a city.



Using a linear model for the data, what was the ***approximate*** average hourly cost for services by plumbing companies in the city?

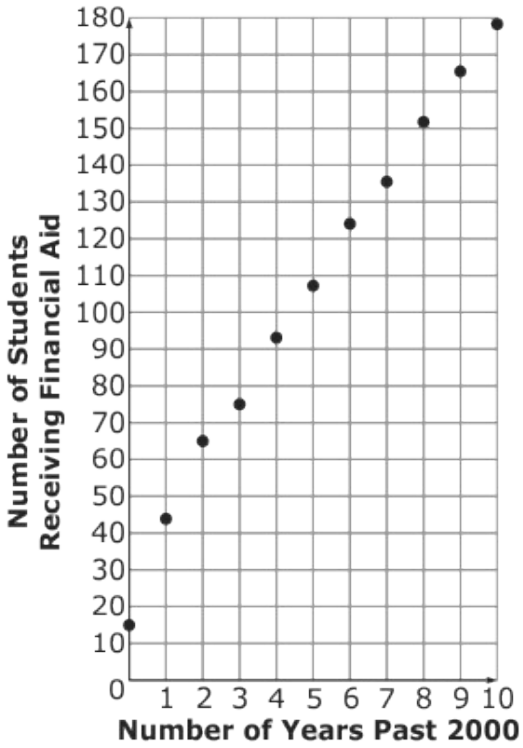
A. $100.00

B. $75.00

C. $65.00

D. $40.00

13. The scatterplot below shows the number of students receiving any type of financial aid at a school from 2000–2010.



Based on the model, which is the ***best*** prediction for the number of students who will be receiving financial aid in 2013?

A. 200 students

B. 210 students

C. 225 students

D. 250 students

14. Ann owns 2 ice cream shops. She asked customers in both shops whether they prefer vanilla, chocolate, or swirl ice cream. The results of her survey are in the table.

	Vanilla	Chocolate	Swirl
Dreamery Shop	12	16	22
Oak St. Shop	17	14	19

Based on the table, which statement is true?

A. More customers prefer single flavors of ice cream over the Swirl ice cream.

B. More customers prefer Vanilla ice cream than Chocolate.

C. One-third of the customers prefer Chocolate ice cream.

D. Over half of the customers prefer Swirl ice cream.

15. Students at a school were surveyed to see how many hours per day they play video games. The results are shown in the table below.

	Less Than 1 Hour	1–3 Hours	More Than 3 Hours
6th Grade	40	62	97
7th Grade	53	78	18
8th Grade	38	91	31

Based on the table, which statement is true?

A. Most students play more than 3 hours of video games per day.

B. Over 50% of students play 1–3 hours of video games per week.

C. More students play 1–3 hours of video games each day than any other amount of time.

D. More students play less than 1 hour of video games per day than any other amount of time.