Test Name: PreAlg Sem Final Review   **Your Name:** _____

ReviewScan™ Test Code: 336602   **Teacher:** _____

Date: _____   **Class Name:** _____

1. Place the following in order from **greatest** to **least**.

−43, 24, 43, −24, 0

   A 43, 24, 0, −24, −43
   B 43, 24, 0, −43, −24
   C 43, 24, −24, −43, 0
   D −43, −24, 0, 24, 43

2. If $\dfrac{3}{5} < x < 67\%$, which of the following could be the value of x?

   A 0.55
   B 0.6
   C 0.65
   D 0.7

3. For every 8 customers that went to the ice cream store, 3 ordered their ice cream on cones. If 200 customers came into the store one week, how many would order cones?

   A 25 customers
   B 75 customers
   C 533 customers
   D 600 customers

4. If 18% of the freshman class picked baseball as their favorite sport, which proportion can be used to find *x*, the number of students that picked baseball as their favorite, if there are 540 freshman?

A $\dfrac{18}{100} = \dfrac{x}{540}$ **C** $\dfrac{18}{100} = \dfrac{540}{x}$

B $\dfrac{1}{18} = \dfrac{x}{540}$ **D** $\dfrac{x}{18} = \dfrac{100}{540}$

5. **The deepest place in the ocean is 10,920 meters below the ocean surface. What is this number written in scientific notation?**

A 1.092×10^3
B 1.092×10^4
C 10.92×10^4
D 1.092×10^5

6. One number, *a*, is 18 more than 3 times another number, *n*. What is the correct equation for the number *a* in terms of *n*?

A $a = 18n + 3$ **C** $a = 3n + 18$

B $a = 18n - 3$ **D** $a = 3n - 18$

7. A serving of cookies has 300 calories and 60% of those are from fat. Isaac eats 2.5 servings of cookies. Which expression shows how many fat calories Isaac has eaten?

A $300 \times 0.06 \times 2.5$ **C** 2.5×60

B $300 \times 0.6 \times 2.5$ **D** 300×60

8. Isobel had $12.80 in her pocket. She bought a magazine for $2.95, a pen for $0.65, and a pack of gum for $0.58. How much money did Isobel have left after making these purchases?

   A $8.62
   B $8.82
   C $9.20
   D $9.85

9. Indira plans on treating her parents to a musical performance at the local theater. If she buys 3 tickets to a Saturday performance, the total cost will be $150. If she buys 3 tickets to a Wednesday performance, the total cost will be $126.75. How much more will the tickets for the Saturday performance cost than the tickets for the Wednesday performance?

   A $13.25
   B $23.25
   C $33.25
   D $23.75
   E   None of these

10. Grapes are on sale for $1.89 per pound. Sarah bought 2.35 pounds of grapes. What is a reasonable estimate for the amount that Sarah paid for her grapes?

   A   less than $3.00
   B   between $3.00 and $4.00
   C   between $4.00 and $5.00
   D   more than $5.00

11. Armando found shirts on sale. The shirts were normally $24.95 each, but the sale was 20% off if you buy 2 shirts. Armando uses mental math to determine how much money he would save if he bought 4 shirts. Which number below is the most reasonable savings for Armando to have determined?

   A $5
   B $10
   C $20
   D $80

12. Holly reads about 1,300 words in 5 minutes. If she is reading at this rate for 90 minutes, how many words will she read?

    A 117,000

    B 31,200

    C 23,400

    D 6,500

13. Dennis paid $5.50 for 2 pounds of candy. How much would he pay for 5 pounds of candy?

    A $10.00

    B $10.50

    C $13.75

    D $27.50

14. Kelly drives 350 miles in 6 hours. How far does he drive in 9 hours?

    A 400 miles

    B 475 miles

    C 525 miles

    D 700 miles

15. Look at the graph below.
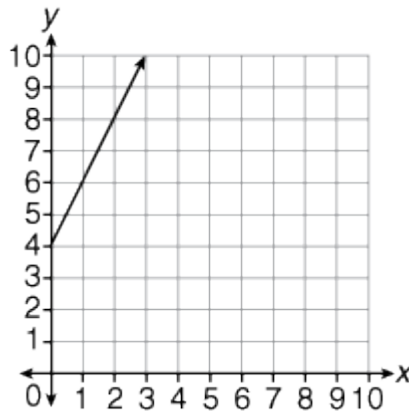
Which scenario below could be represented by the graph?

    A For every dollar that George donates, Stella will donate $2.

    B A plant was originally 4 centimeters tall. Every week its height doubles.

    C Maria starts with 2 decorations for the Homecoming Dance. Each week she makes 4 more.

    D Jeff begins the summer mowing 4 lawns. Every week, he adds 2 more lawns to his total.

16. Which of the following equations can be written as a proportion?

    A Three pounds of almonds cost $14.97. Write an equation for the price, y, of x pounds of almonds.

    B A plumber charge $75 for a service call plus $50 per hour. Write an equation for the cost, c, of repair work that lasts x hours.

    C A savings account that begins with $100 earns 3.0% interest each year. Write an equation for the total amount, a, in the account after x years.

    D Balloons cost $2.00 each for quantities less than 10 and $1.75 each for quantities more than 10. Write an equation for the cost of x balloons.

17. Miguel found a website where he can download 4 music videos for $5. Which of the following websites sells videos for the same price?

    A website A: 2 videos for $2.85

    B website B: 3 videos for $4.50

    C website C: 5 videos for $6.00

    D website D: 7 videos for $8.75

18. Scott bowled a total of 585 pins in 3 games. Dave bowled a total of 440 pins in 2 games. Based on these scores, which statement is true?

    A Dave's average per game is 25 pins higher than Scott's.

    B Scott's average per game is 25 pins higher than Dave's.

    C Scott's average per game is 145 pins higher than Dave's.

    D Dave's average per game is 145 pins higher than Scott's.

19. 55% of 14 =

    A 770.0

    B 77.0

    C 7.7

    D 0.77

    E None of these

20. 62.5% of the students in the eighth grade wanted to have a school play. There are 264 students in the eighth grade. How many students did **not** want to have a school play?

    A 33

    B 66

    C 99

    D 165

21. The Smith family spends $880 per month for rent. If the family income is $2,200 per month, what percent of its income is spent for rent?

    A 0.4%

    B 4%

    C 40%

    D 400%

22. Popcorn at the movies that used to cost $2.00 a bag has been increased to $2.60 a bag. What is the percent increase in the price of a bag of popcorn?

    A 60%

    B 56%

    C 30%

    D 3%

23. Which scatterplot best shows the relationship between the amount of exercise a person does and the number of calories burned?
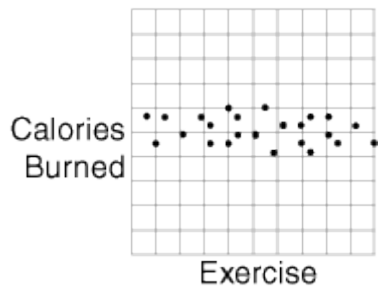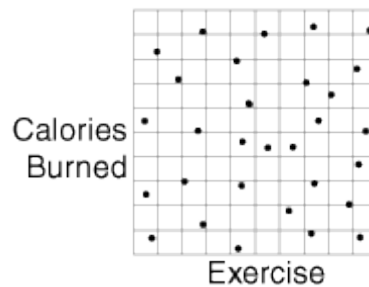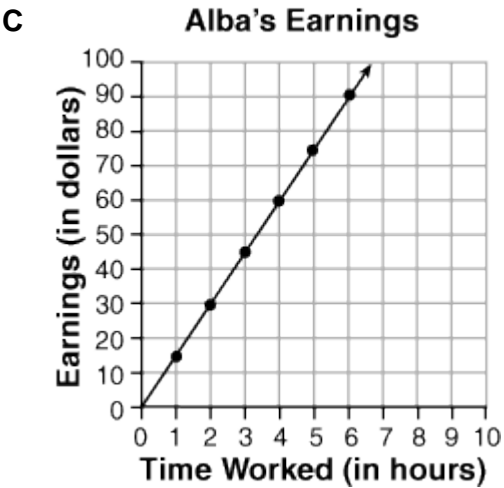
A

Calories Burned

Exercise

C

Calories Burned

Exercise

B

Calories Burned
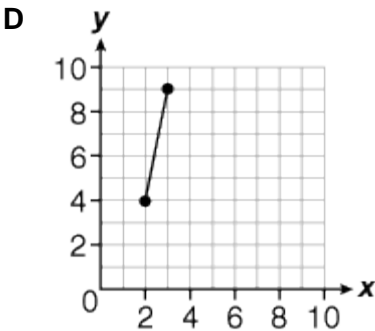
Exercise

D

Calories Burned

Exercise
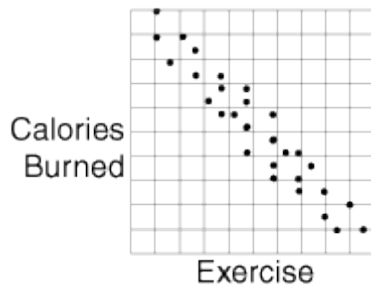
24. Alba earns $7.50 per hour working at the movie theater. Which graph describes Alba's earnings?

A

Alba's Earnings

C

Alba's Earnings

B

Alba's Earnings

D

Alba's Earnings

25.

x	y
0	0
1	1
2	4
3	9

Which graph represents the data from the table above?

A

C

B

D
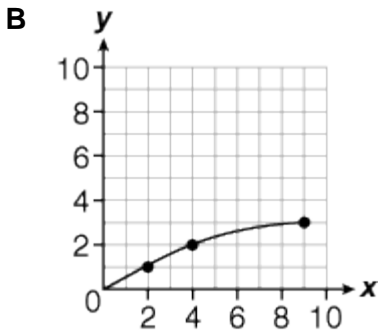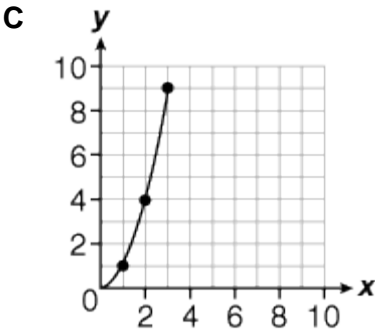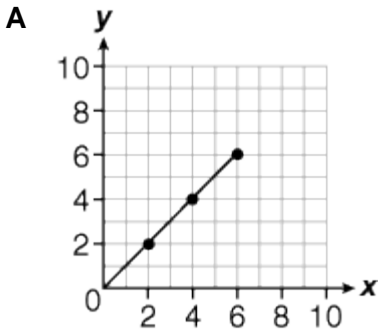
26. The five tallest trees in the United States are listed in the chart below. Study the chart.

Tallest Trees in the U.S.

TREE	LOCATION	HEIGHT
Coast redwood	Jedediah Smith State Park, Calif.	321 feet
Coast Douglas fir	Olympic National Forest, Wash.	281 feet
General Sherman giant sequoia	Sequoia National Park, Calif.	275 feet
Noble fir	Mt. St. Helens National Monument, Wash.	272 feet
Sugar pine	Dorrington, Calif.	232 feet

Which of the bar graphs most accurately shows the data in the chart?

A

Trees

C

Trees

B

Trees

D

Trees
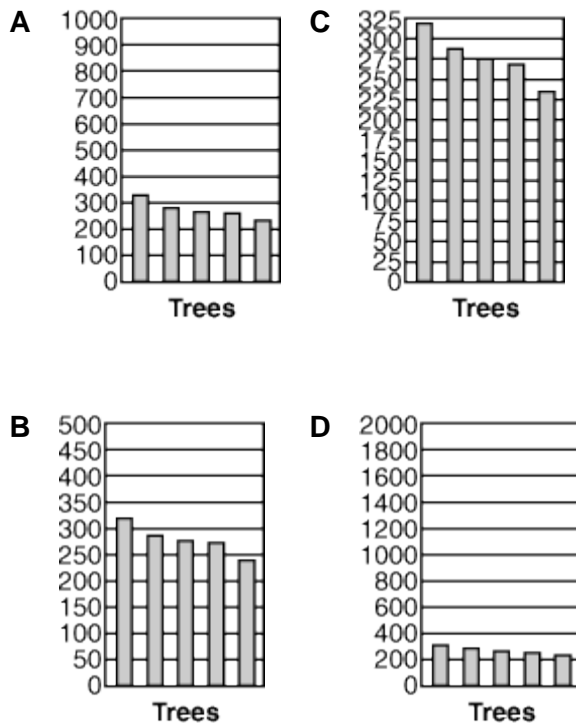
27. The table shows the amount of money Nick has in his savings account each week.

Week	Amount in Savings
0	$25
1	$30
2	$35
3	$40
6	$55

Based on the pattern how much would Nick have in his savings account after 18 weeks?

A $60

B $90

C $115

D $215

28. The picture graph shows the number of people who rented surfboards at the beach each day last week.
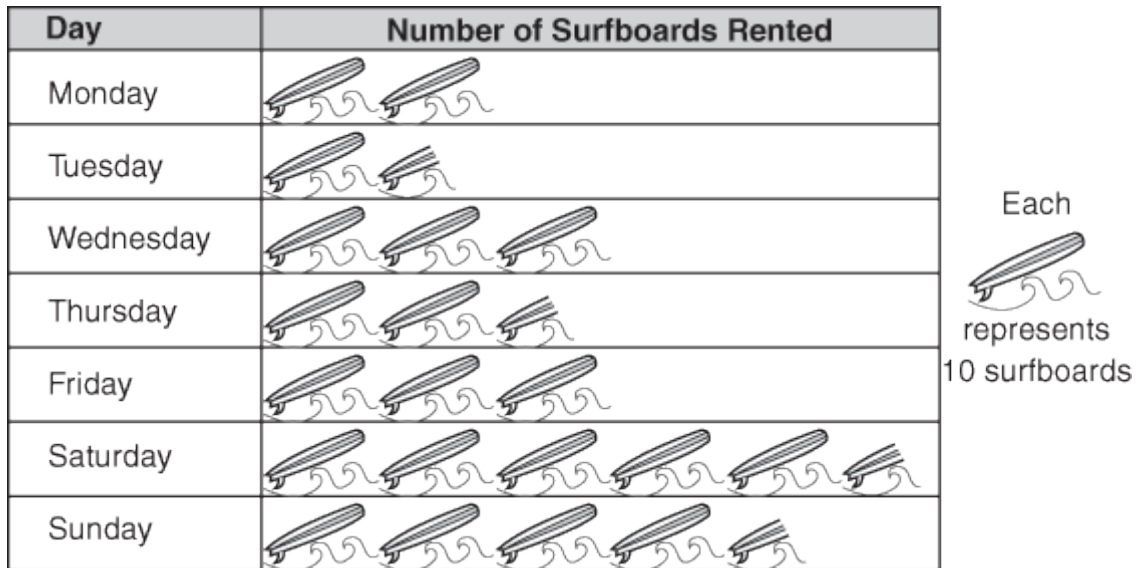
On what day were there $\frac{1}{3}$ as many surfboards rented as on Sunday?

A Monday

B Tuesday

C Wednesday

D Thursday

29. Jorge is taking a wilderness vacation. The circle graph below shows the amount of the trip that he will spend sailing, kayaking, and backpacking. If the trip will last 60 days, about how many days will Jorge spend kayaking?

Adventure Vacation
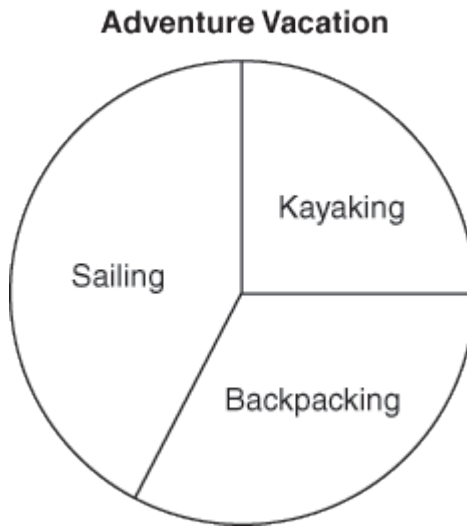
- **A** 15
- **B** 20
- **C** 25
- **D** 30

30. Abdul made a line graph to show how the price of stock changes over the course of a day.

Stock Price
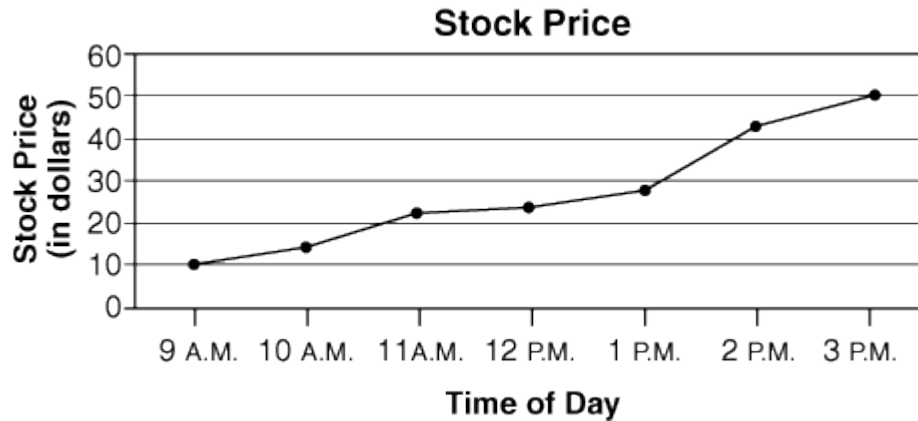
During which period of time did the price of stock increase the most?

A 10 a.m. to 11 a.m.

B 11 a.m. to 12 p.m.

C 1 p.m. to 2 p.m.

D 2 p.m. to 3 p.m.

31. Which expression can be used to find the *n*th term in the following arithmetic sequence?

Position in Sequence	1	2	3	4	n
Term	37	60	83	106	

A 23*n*

B 37*n* + 23

C 14*n* + 23

D 23*n* + 14

32. The table shows the relationship between p, the number of pounds a package weighs, and a, the amount of money it costs to ship the package.

p	1 pound	2 pounds	3 pounds	4 pounds	5 pounds
a	$2.00	$4.00	$6.00	$8.00	$10.00

Which formula below describes the pattern in the table?

A $a = 2p + 1$

B $a = 2(p + 1)$

C $a = p + 2$

D $a = 2p$

33. A toy store is displaying marbles in containers. The first container has 120 marbles in it. The second container has 152 marbles. The third container has 184 marbles. If this pattern continues, how many marbles will be in the *sixth* container?

A 248

B 280

C 290

D 312

34. Lenny is setting up chairs for the debate. He puts 6 chairs in the first row, 14 chairs in the second row, 22 chairs in the third row, 30 chairs in the fourth row, and 38 chairs in the fifth row. If he continues this pattern, how many chairs will there be in the *ninth* row?

A 46

B 54

C 62

D 70

35. **On a popular TV game show, contestants try to win a car by drawing from a bag. The bag contains the 5 numbers in the price of the car, as well as 3 strikes. Once a number or strike is drawn, it is not replaced. What is the probability that the first draw will be a strike?**

    A $\dfrac{1}{3}$

    B $\dfrac{1}{8}$

    C $\dfrac{3}{5}$

    D $\dfrac{3}{8}$

36. A bag of lollipops contains 6 cherry and 5 grape lollipops. If 2 lollipops are taken from the bag at random, what is the probability that BOTH lollipops will be cherry?

    A $\dfrac{6}{11}$

    B $\dfrac{30}{121}$

    C $\dfrac{1}{2}$

    D $\dfrac{3}{11}$

37. Selma reached into a coin jar, randomly pulled out 100 coins, and found that 20 of them were nickels. If the jar originally contained 250 coins, what would be a reasonable estimate for the total number of nickels originally in the jar before Selma took any out?

   A 40

   B 50

   C 62

   D 80

38. If Sam flips a fair coin 25 times and gets heads each time, what is the probability of getting heads again?

   A 0

   B $\dfrac{1}{25}$

   C $\dfrac{1}{2}$

   D 1

39. Emily has a bag filled with gum balls, but she does not know how many gum balls or what color gum balls are in the bag. She takes a gum ball from the bag, records the color, and then replaces it in the bag. She repeats this experiment several times and records her results in the chart below.

Blue	Purple	Red	Pink	Yellow
8	11	7	5	9

Based on this chart, what is the probability that the next gum ball she draws is pink?
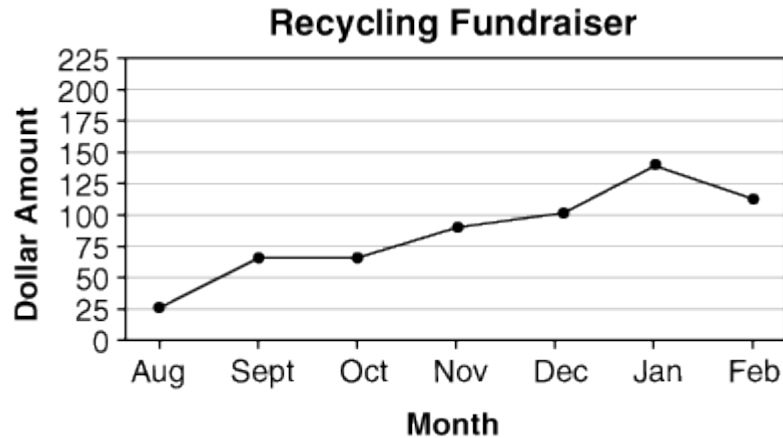
A $\dfrac{1}{9}$

B $\dfrac{1}{8}$

C $\dfrac{1}{7}$

D $\dfrac{1}{5}$

40. This graph shows the money earned by the football team each month for recycling newspapers.

Recycling Fundraiser

For which two months does it appear that the amount of money earned for recycling papers neither increased nor decreased?

   A August and September

   B September and October

   C November and December

   D January and February

41. A farmer sold 85 chickens. The following data was recorded about the chickens.

Measure of Data	Weight (pounds)
Range	3
Median	6
Mode	7
Mean	8

Which measure of data could be used to calculate the total weight of the chickens sold?

   A mean

   **B** median

   C mode

   D range

42. The mode salary of the employees at a company is $28,000. What conclusion can be drawn from this information?

    A Most people at the company make $28,000.

    B More people make $28,000 than any other salary at the company.

    C Nobody makes more than $56,000 at the company.

    D Some people make less than $28,000 at the company.

43. The scatterplot below shows the number of points that two rival football teams scored per game in each game of the season.

Points During a Game
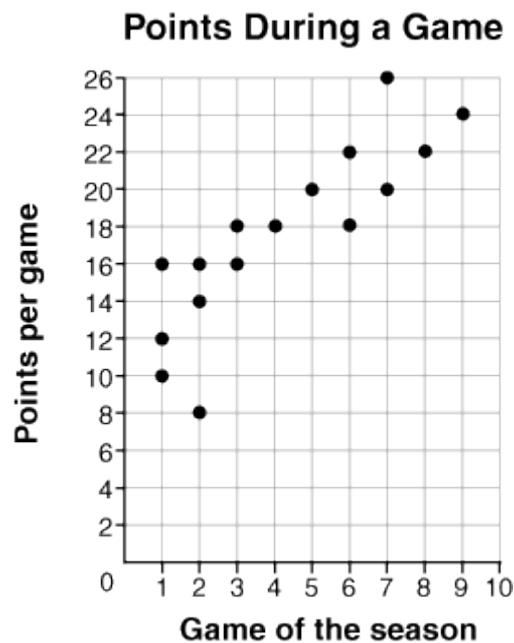
Which best describes the trend shown in the scatterplot?

    A positive trend

    B negative trend

    C cannot be determined

    D no trend

44. Mrs. Williams recorded the number of absences of each student in her 8th grade class and their class averages during the 2nd grading period. The scatterplot below shows their data.

The Result of Being Absent from Class
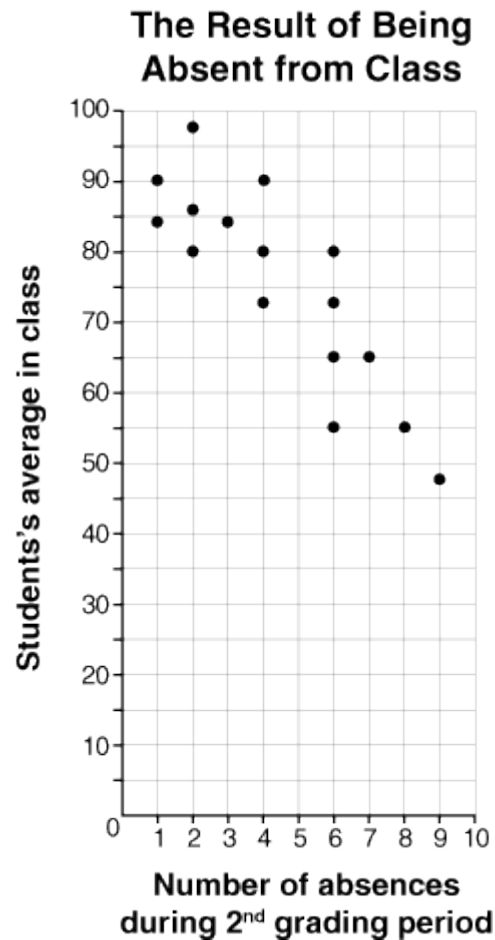
Which description best represents the relationship between the number of absences a student accrues and their class average?

A positive trend

B negative trend

C no trend

D cannot be determined

45. Catherine asked 30 classmates how many minutes they spent doing homework the night before. The minimum number of minutes was 15 and the maximum number of minutes was 65. The median number of minutes spent on homework was 38. Which box plot could represent Catherine's data?

A

C

B

D
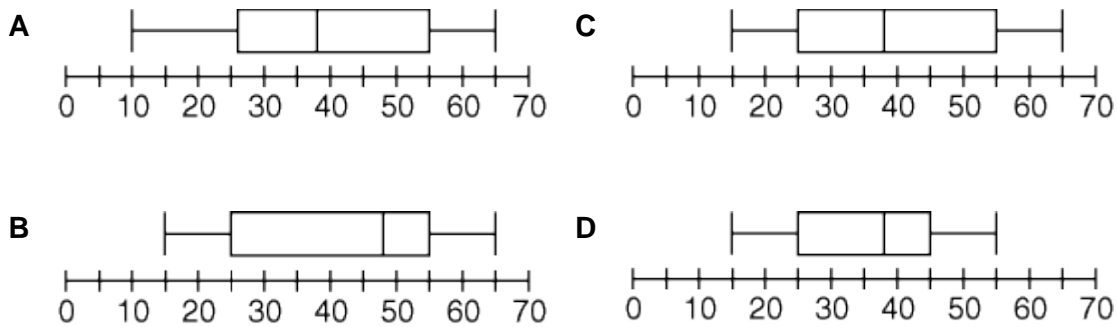
46. Taylor surveyed her middle school track team about their favorite method of exercise. Her data is shown in the table below.

| Exercise	Number of Students
Running	35
Swimming	18
Weight lifting	6
Yoga	17

Taylor concluded that at her school, about 6 times as many students like to run as to lift weights. Which is the **best** reason why her conclusion may not be valid?

A Only 35 out of 76 students prefer running.

B Her conclusion needs to be shown graphically.

C Her survey is not representative of all the students in the school.

D Her survey should have been conducted each day of the week and averaged.

47. For his social studies project, Sean plans to survey students at his school to see who they would vote for (if they were old enough) in the next congressional election. Which sample is the **best** representation of the school's entire population?

    A all the students Sean can find at the food court in the shopping mall

    B 1 of every 10 students leaving a school-wide assembly

    C 1 of every 5 students in the Environmental Club

    D the students in Sean's social studies class

48. The average price of gasoline from January 2007 to July 2008 is presented on the graph below.

Months
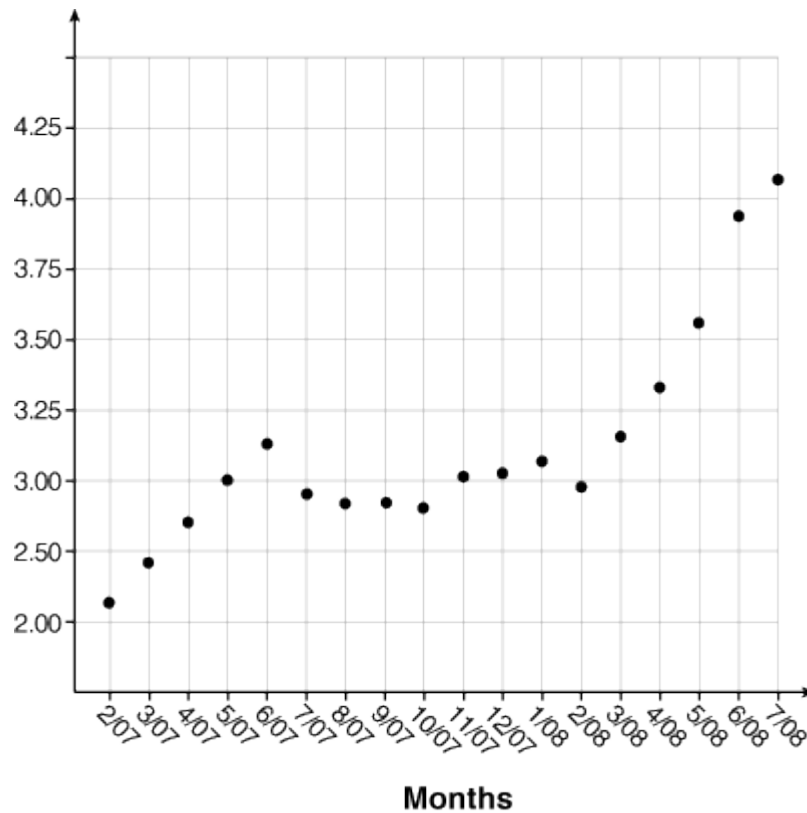
Which is the best description of the representation of the data?

A A quick glance at this graph accurately shows how much the price of gasoline rose between January 2007 and July 2008.

B Because the scale on the *y*-axis changes as the price increases, it is easier to accurately read the changes.

C A line graph like this should not be used because one of the axes contains dates instead of numbers.

D Changing the scale on the *y*-axis gives the misleading impression that the price of gasoline has increased more than it actually has.

49. Principal Brown determined that 70% of the students at his school wore their spirit shirts on at least one Friday during the school year. If there are 980 students in his school, which statement represents his data?

A $\frac{1}{3}$ of the students wore their spirit shirts on a Friday.

B 700 of the students wore their spirit shirts on a Friday.

C 686 of the students wore their spirit shirts every Friday.

D 294 students did not ever wear their spirit shirts on a Friday.