

Connected Math Summer Packet**Multiple Choice**

Identify the choice that best completes the statement or answers the question and *SHOW ALL WORK*.

1. In which quadrant does the point $(-9, 7)$ lie?

- a. I b. II c. III d. IV

2. $-\frac{4}{5} + -1.7 =$ _____

- a. -5.12 b. -2.5 c. -0.9 d. $-\frac{25}{20}$

3. $520 - -264 =$ _____

- a. 256 b. 344 c. 244 d. 784

4. The ratio of boys to girls in a class is 2 to 3. There are 12 boys in the class. How many girls are there?

- a. 8 b. 18 c. 13 d. 30

5. Find the value of x in this proportion.

$$\frac{6}{21} = \frac{10}{x}$$

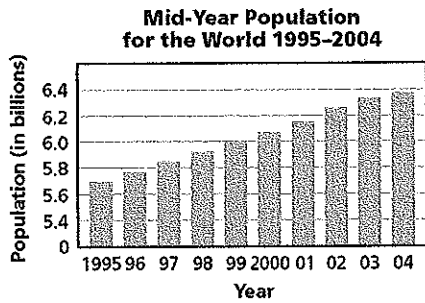
- a. 35 b. 25 c. 40 d. 30

6. The ratio of teachers to students is 1 to 26. Find an equivalent ratio.

- a. 52 to 2 b. 11 to 36 c. 26 to 1 d. 5 to 130

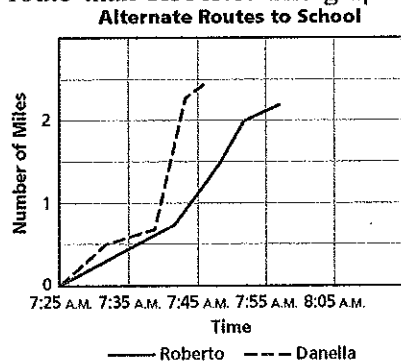
7. A store sells packages of pencils. Which package offers the best unit price?

- a. 11 pencils for \$2.97 c. 14 pencils for \$3.64
b. 12 pencils for \$2.88 d. 15 pencils for \$3.75



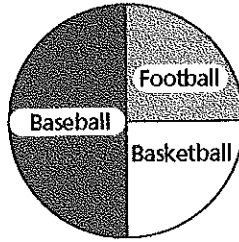
8. In 1995, what was the world's mid-year population?
- a. about 5.7 billion
 - b. about 5.8 billion
 - c. about 5.9 billion
 - d. about 6 billion
9. What do you predict would be the world's mid-year population by 2012?
- a. about 6 billion
 - b. about 6.5 billion
 - c. about 7 billion
 - d. about 7.5 billion

Roberto and his sister Danella both attend the same school. Last Wednesday Danella used a different bicycle route than Roberto. The graph shows their trips to school.



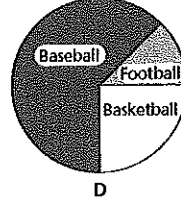
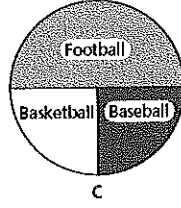
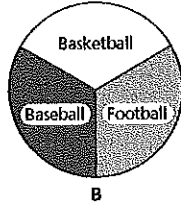
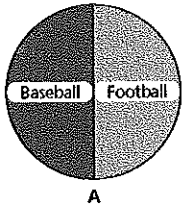
10. About how much earlier did Danella arrive at school than Roberto?
- a. about 1 minute
 - b. about 2 minutes
 - c. about 10 minutes
 - d. about 15 minutes
11. What is an estimate of how many miles Roberto biked?
- a. about 2 miles
 - b. about 3 miles
 - c. about 21 miles
 - d. about 32 miles

Peter collects cards showing professional sports players in different sports. Use this graph that shows the proportions of the different types of sports cards in Peter's collection.



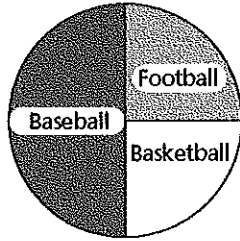
12. If Peter has 60 cards in his collection, how many baseball, football and basketball cards does he have?
- 20 baseball, 20 football and 20 basketball
 - 30 baseball, 20 football, and 10 basketball
 - 30 baseball, 15 football and 15 basketball
 - 40 baseball, 10 football and 10 basketball

13. Peter trades $\frac{1}{2}$ of his baseball cards for the same number of football cards. Which graph below shows his new collection?



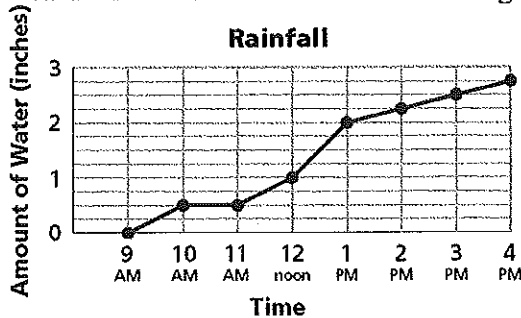
- Circle Graph A
- Circle Graph B
- Circle Graph C
- Circle Graph D

14. Starting with his original collection of cards, which trade would give Peter the same amount of football cards as baseball cards?



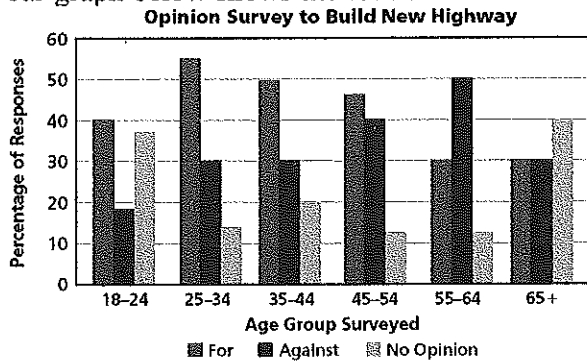
- trades $\frac{1}{4}$ of his baseball cards for the same amount of football cards
- trades $\frac{1}{4}$ of his baseball cards for the same amount of basketball cards
- trades $\frac{1}{2}$ of his football cards for the same amount of basketball cards
- trades $\frac{1}{2}$ of his basketball cards for the same amount of football cards

The 7th grade science class measured the amount of rainfall during one school day. Every hour a student measured the level of water in the rain gauge to the nearest quarter inch. The graph shows the results.

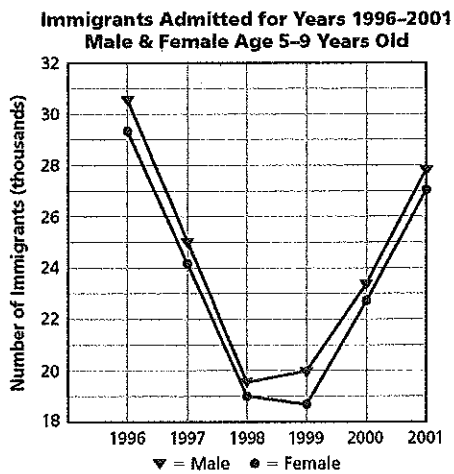


15. What was the water level at 11 A.M.?
- $\frac{1}{2}$ inch
 - $1\frac{1}{2}$ inches
 - $\frac{1}{4}$ inch
 - 2 inches
16. Which of these hours had the greatest amount of rainfall?
- 11 A.M. to 12 noon
 - 12 noon to 1 P.M.
 - 2 P.M. to 3 P.M.
 - 3 P.M. to 4 P.M.
17. Some students went outside and played soccer for an hour when it was not raining. According to the information in the graph, which of these times could be the time when they played soccer?
- 9:00 A.M. to 10:00 A.M.
 - 10:00 A.M. to 11:00 A.M.
 - 12:00 A.M. to 1:00 A.M.
 - 2:00 P.M. to 3:00 P.M.

The local newspaper surveyed Morganville citizens for their opinions on whether to build a new highway. The bar graph below shows the results of that survey. Study the bar graph.



18. Which of these statements does the information in the graph support?
- There are more people who support building a new highway than oppose it.
 - Every person within each age group has the same opinion.
 - Most of Morganville's older citizens are in favor of building a new highway.
 - Every person surveyed had an opinion on whether to build a new highway.

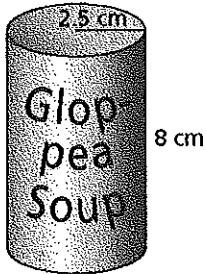


19. Which statement describes the trend of male and female immigrant children entering the U.S.?
- decreases then increases with the number of females slightly greater than the number of males
 - increases then decreases with the number of males slightly greater than the number of females
 - decreases then increases with the number of males slightly greater than the number of females
 - no trend is suggested in the data shown on the graph

20. Javier's test scores were 85, 85, 97, 98, and 100. His teacher told the class that they could choose which measures of center they wanted her to use to determine final grades. Which measure do you suggest that Javier choose?

- a. Mean b. Median c. Mode d. Range

21. What is the surface area of the can of soup?



- a. 157.07 cm² b. 628.32 cm² c. 164.93 cm² d. 282.74 cm²

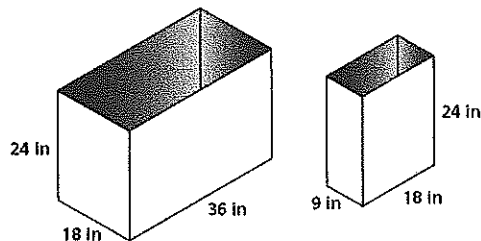
22. A cone has a base that is $12\frac{1}{2}$ cm² and a height of 10 cm. What is the volume?

- a. 125 cm³ b. $41\frac{2}{3}$ cm³ c. $83\frac{1}{3}$ cm³ d. $62\frac{1}{2}$ cm³

23. A rectangular prism has a volume of 154 in³. Which set of dimensions below could be the dimensions of the prism?

- a. 6 by 8 by 3 b. 5 by 6 by 7 c. 2 by 7 by 11 d. 3 by 8 by 9

24. Hillary is moving. She has many different boxes in which to pack her stuff. How many times greater is the volume of the larger box compared to the volume of the smaller box?



- a. 8 b. 4 c. 15,552 d. 3,888

25. What is the approximate volume of a sphere with a diameter of 4 centimeters?

- a. 268 cm³ b. 134 cm³ c. 75 cm³ d. 33.5 cm³

26. A cylindrical pop can is 12.5 centimeters tall and 5.5 centimeters wide. What is the volume of the pop can?
 a. 1187.91 cm³ b. 88.36 cm³ c. 215.98 cm³ d. 296.98 cm³
27. Annie wanted to paint her living room walls blue. The room is 26 feet by 22 feet by 8 feet high. How many cans of paint will she need if each gallon covers 88 square feet (ignore doors and windows)?
 a. 6 cans b. 9 cans c. 8 cans d. 5 cans
28. Maurice's family put a pool into their backyard. It is rectangular in shape and its dimensions are 20 feet by 10 feet by 10 feet. It costs \$0.05 per cubic ft to fill the pool. How much will it cost Maurice's family to fill their new pool?
 a. \$100 b. \$200 c. \$150 d. \$50
29. Which of the following data sets is linear?

a.

x	3	4	5	6
y	5	7	10	15

c.

x	3	4	5	6
y	9	16	25	36

b.

x	3	4	5	6
y	6	9	12	15

d.

x	3	4	5	6
y	3	9	27	81

30. Which of the following is linear?
 a. $y = 2 + 3x$ b. $y = 2x(x + 5)$ c. $y = 4x^2$ d. $y = 2^x$

Use the following table to answer the questions.

X	1	2	3	4
Y	4	7	10	13

31. What is the slope of data set?
 a. 4 b. 3 c. 1 d. 9
32. Consider the equation $y = 4x - 10$. Find y if $x = 3$.
 a. 33 b. 12 c. 2 d. -3

33. What is the equation of the line that contains the points (2, 13) and (6, 33)?

a. $y = \frac{1}{5}x + 3$

c. $y = \frac{1}{5}x + 5$

b. $y = 5x + 5$

d. $y = 5x + 3$

34. Determine which ordered pair is NOT a solution of $y = -x - 7$.

a. (3, -9)

b. (-4, -3)

c. (-7, 0)

d. (4, -11)

35. What is the value of y when x is 68?

x	y
92	23
96	24
100	25
104	26
108	27

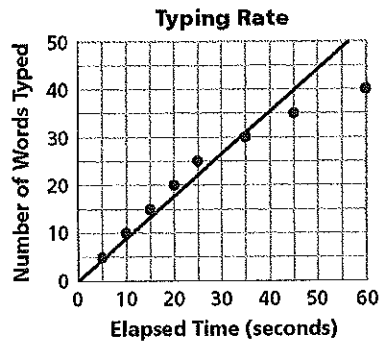
a. 17

b. 18

c. 16

d. 19

36. Approximately how many words had this student typed in 30 seconds?



a. 20

b. 24

c. 28

d. 34

37. If $y = x - 19$, what is the value of x when $y = 34$?

a. 15

b. 53

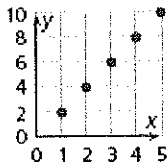
c. -15

d. -53

Name: _____

ID: A

38. Which equation shows the relationship between x and y shown in the graph?



- a. $y = x + 2$ b. $y = 2x$ c. $y = 2x + 2$ d. $y = \frac{1}{2}x$

39. Which of the following **best** explains how the following pattern is formed?

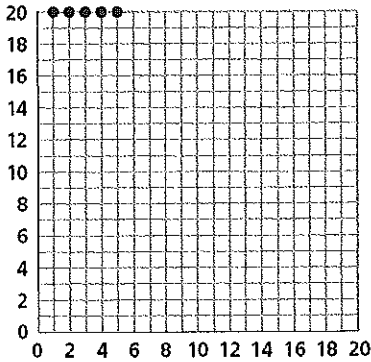
2 3 5 8 13 ...

- a. Multiply each number by the number before it
b. Add 1, add 2, add 3, and so on
c. Multiply by 2 and subtract 1
d. Add the previous two numbers together to get the new number

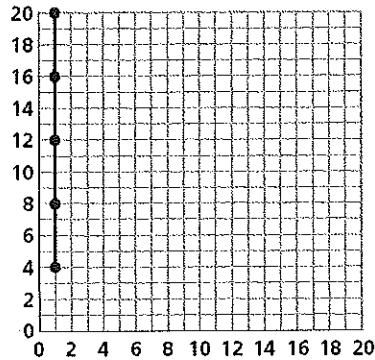
40. Which graph best represents the table below?

Length of Side of a Square	1	2	3	4	5
Perimeter	4	8	12	16	20

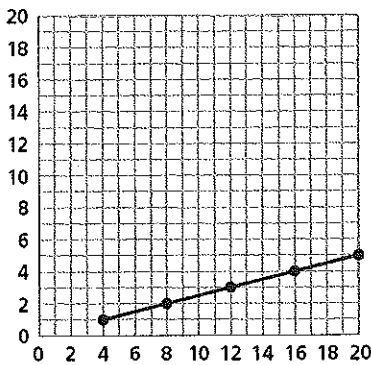
a.



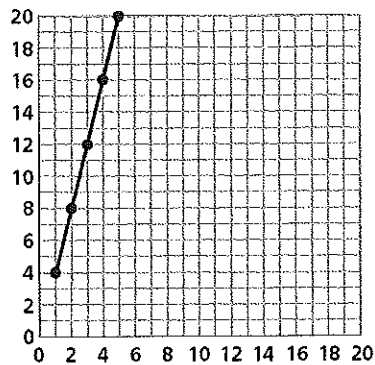
c.



b.



d.



41. On any given day, the cafeteria offers 3 main dishes for lunch (pizza, hamburger, or the featured item that day) and 3 kinds of drinks (white milk, chocolate milk, or apple juice). How many possible choices are there for lunch?

- a. 3 b. 6 c. 9 d. 12

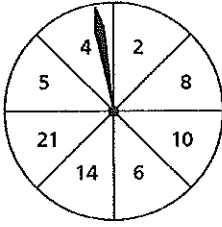
42. Candice is the best hitter on her high school softball team. She gets on base safely 60% of the time. What is the probability that her next at bat will result in her getting on base?

- a. $\frac{3}{5}$ b. $\frac{1}{6}$ c. $\frac{1}{2}$ d. $\frac{2}{5}$

43. The probability of rolling a 6 on a regular number cube is $\frac{1}{6}$. If Jacob tosses a number cube 24 times, how many times would he expect to roll a 6?

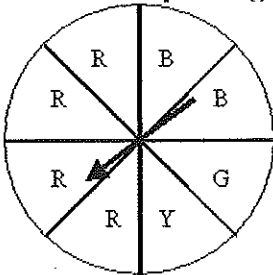
- a. 2 b. 4 c. 3 d. 5

44. What is the probability of spinning a multiple of 4 on the spinner below?



- a. $\frac{1}{2}$ b. $\frac{1}{4}$ c. $\frac{3}{4}$ d. $\frac{3}{8}$
45. J'Mesha and Aarti each bought a gift and wanted to have it wrapped at the store. The store offers 2 designs of paper (solid or polka dots) and each design comes in 3 different colors. If the clerk chooses the paper randomly, what is the probability that the gifts will get wrapped identically?
- a. $\frac{1}{2}$ b. $\frac{1}{3}$ c. $\frac{2}{6}$ d. $\frac{1}{6}$
46. A spinner that has 3 sections of equal area, numbered from 1 to 3, is spun two times in succession. Which is NOT part of the sample space?
- a. (1, 3) b. (3, 3) c. (3, 2) d. (3, 4)

A game involves spinning this spinner.



47. What is the probability of the pointer landing on G?
- a. $\frac{3}{8}$ b. $\frac{1}{8}$ c. $\frac{1}{2}$ d. $\frac{5}{8}$
48. A standard number cube with the numbers 1 through 6 is rolled. Find the probability of rolling a number greater than 2.
- a. $\frac{1}{3}$ b. $\frac{1}{6}$ c. $\frac{1}{2}$ d. $\frac{2}{3}$

Name: _____

ID: A

You randomly select one marble from a barrel containing 1 blue, 6 yellow, 7 red, 4 green, and 6 purple marbles.

49. Find the experimental probability of randomly selecting a marble that is NOT yellow.

a. $\frac{13}{24}$

b. $\frac{2}{3}$

c. $\frac{12}{13}$

d. $\frac{3}{4}$

50. Find the experimental probability of randomly selecting either a green or a purple marble.

a. $\frac{11}{24}$

b. $\frac{1}{2}$

c. $\frac{3}{8}$

d. $\frac{5}{12}$