

No calculator is allowed. Write the letter of the answer you choose on the provided answer form.
Note that, all the questions are single-choice questions.

1. Enrique had some marbles. He divided them equally into two piles and gave one pile to Federico. Federico divided his pile equally into two piles and gave one pile to Georgio. Georgio had 4 marbles. How many marbles did Enrique have to begin with?

Which of the following problem-solving strategies would be most appropriate to use to solve this problem?

- A. Set up an equation.
- B. Make comparative lists.
- C. Work backwards.
- D. Use a manipulative.

2. A farmer has both pigs and chickens on his farm. There are 78 feet and 27 heads. How many pigs and how many chickens are there?

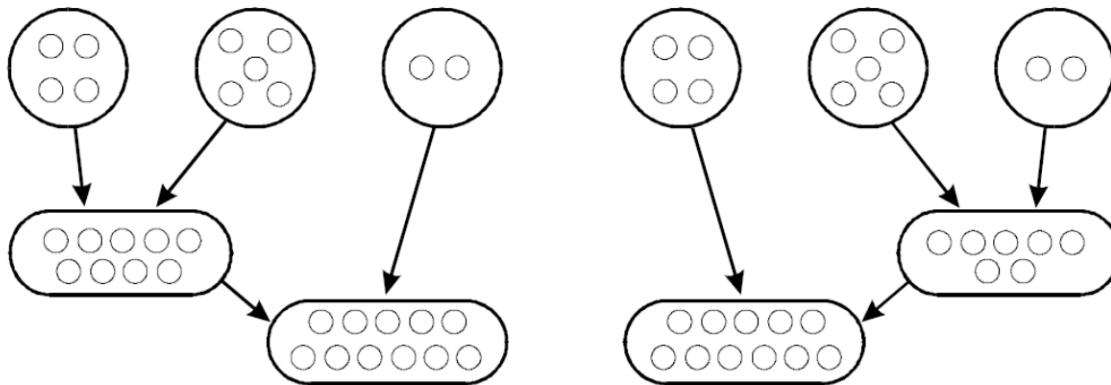
Which of the following problem-solving strategies would be most appropriate to use to solve this problem?

- A. Work backwards.
- B. Make comparative lists.
- C. Set up an equation.
- D. Find a pattern

3. Which equation below does **NOT** show the associative property for addition or multiplication? The diagram below (resource from NY multiple-subject sample question) could be used to model which of the following?

- A. $a + (b + c) = (a + b) + c$
- B. $191 + 18 + 9 = (191 + 9) + 18$
- C. $15 \times (3 + 5) = 15 \times 3 + 15 \times 5$
- D. $11 + 17 + 9 + 13 = (11 + 9) + (17 + 13)$

4. The diagram below (resource from NY multiple-subject sample question) could be used to model which of the following?



- A. A function machine
- B. The associative property
- C. Prime factorization
- D. Conditional probability

5. Barack buys ten pieces of fruit. He buys A many apples, B many bananas, and P many pears. Apples cost 25 cents each, bananas cost 20 cents each, and pears cost 30 cents each. Barack has \$5 to spend.

What expression shows how much Barack will spend on fruit?

- A. $5 - (A + B + C)$
- B. $A + B + C$
- C. $0.25A + .20B + .30C$
- D. $5 - (0.25A + .20B + .30C)$

6. Three friends shared a Pizza, and each person ate their share at different times in the afternoon. If friend A came first and ate $\frac{1}{4}$ of the pizza, and friend B ate $\frac{1}{3}$ of what was left by friend A, how much was left for friend C?

- A. $\frac{5}{12}$
- B. $\frac{4}{8}$
- C. $\frac{1}{4}$
- D. $\frac{3}{8}$

7. ABCD is a rectangle in the coordinate plane. If the coordinates of point A are (2, 3) and the coordinates of point C are (6, -1), which of the following are possible coordinates of point B and D?

- A. (-3, 2) and (1, 6)
- B. (6, 3) and (-2, -1)
- C. (2, -1) and (6, -1)
- D. (2, -1) and (6, 3)

8. Betina's daughter, Anna, wants balloons for her 4th birthday party. Betina orders two dozen large balloons. Six are red, 14 are white, and the rest are blue. Anna pops one of the balloons. What is the probability that the balloon is blue, the color of her eyes?

- A. 1 out of 3
- B. 4 out of 12
- C. $\frac{4}{20}$
- D. 4 out of 24

9. Which is NOT a property of rectangles?

- A. All its sides are congruent B. The sum of its angles is 360°
 C. It is a quadrilateral. D. It has opposite sides that are parallel E. It is a polygon.

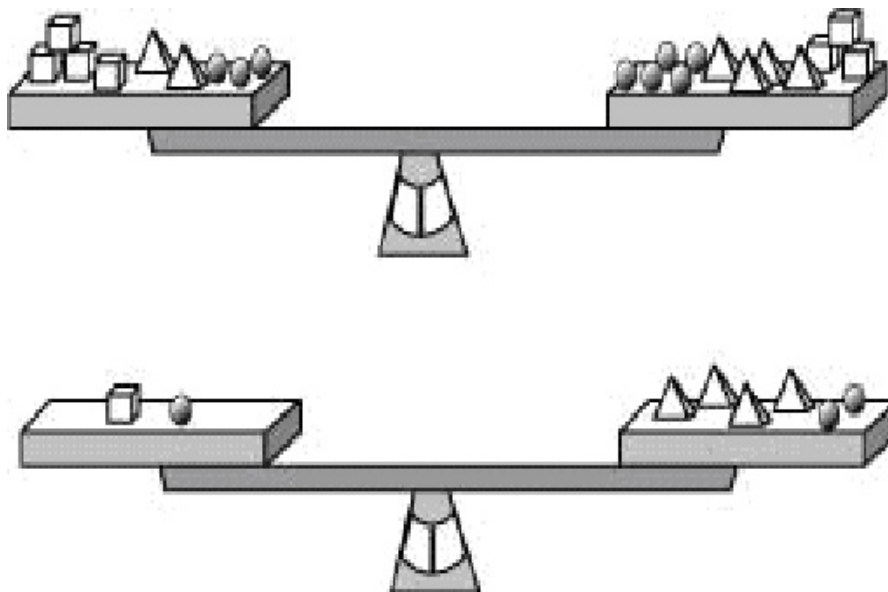
10. About how wide is this page?

- (a) 4 inches (b) 20 inches (c) 4 centimeters (d) 20 centimeters

11. Sophia just bought two New York State lottery tickets. The prize this week is twenty and one-half million dollars more than last week. Last week's prize was \$10,500,000. What is the prize for this week?

- A. \$30 million B. \$32,000, 000 C. \$31 million D. \$30,550,000 E. \$21,500,000

12. Which of the following correctly represent the relationship between the two sides of the balance scales? If x stands for the weight of the cubes, y stands for the weight of the pyramid, and z stands for the weight of the sphere.



- A. $3x+5y+4z = 4x+3y+2z$ (the top scale)
 B. $x + z = 4x+2z$ (the bottom scale)
 C. $x + z < 4y+2z$ (the bottom scale)
 D. $3x+4y+5z = 4x+2y+3z$ (the top scale)

13. How many decimals in the box have a digit "3" in the tenths place and are larger than $1\frac{1}{2}$?

- A. one B. two C. three D. four E. none

31.31			.931
	3.23		1.3
1.53		123	.303

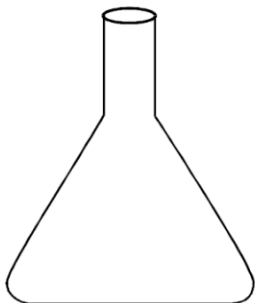
14. Which statement is correct?

A. $2.5 = 2\frac{1}{5}$ B. $0.025 = \frac{25}{100}$ C. $0.4 = \frac{4}{40}$ D. $0.06 = \frac{6}{100}$ E. $0.05 = \frac{50}{100}$

15. Joey loves to bowl. His average for four games was 210. He bowled 220 in the first game and 20 points lower in the second game. He bowled 180 in the third game. What did Joey bowl in the last game?

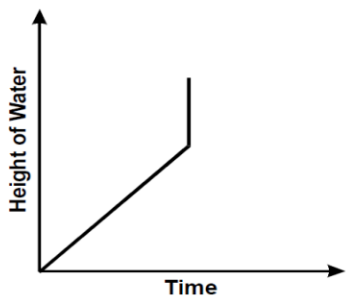
- A. 200 B. 240 C. 180 D. 210 E. 820

16. Use the information below to choose the correct answer (question from NY LAST sample).

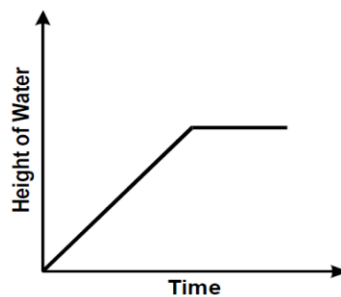


A small stream of water is poured at a constant rate into the flask shown above, until the flask is full. Which of the following graphs best represents the way in which the height of the water in the flask changes in relation to the length of time the water is poured?

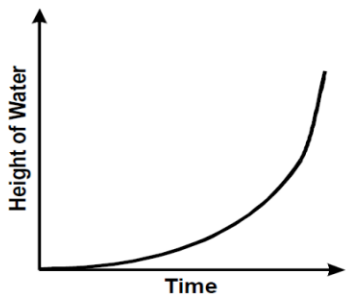
A.



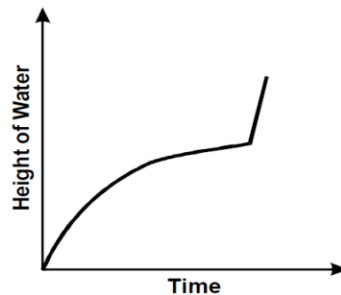
B.



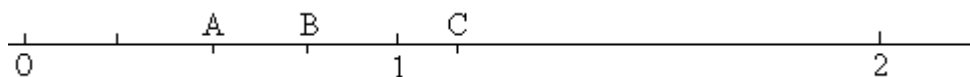
C.



D.



17. Which statement is correct about the number line?



I. Point A is about .49 II. Point B is about $\frac{3}{4}$ III. Point C is about 1.4

A. Only I B. Only I and II C. Only I and III D. Only II and III

18. At her country house, Rosa has a square flower garden. She puts 200 feet of new fence all the way around the garden to keep her granddaughter, Mia, out of the garden. How many square feet of space does her garden have?

A. 200 B. 1,000 C. 2,500 D. 250

19. What is the sum of the two missing fractions in this pattern?

$$\frac{1}{2}, \frac{2}{3}, \frac{?}{?}, \frac{4}{5}, \frac{?}{?}$$

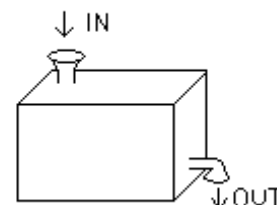
A. $\frac{19}{12}$ B. $\frac{15}{24}$ C. $\frac{3}{8}$ D. $\frac{8}{10}$ E. $\frac{15}{10}$

20. The formula for body mass index is (BMI) $\frac{W}{H^2}$ where W is Weight (Kilograms) and H is height (meters). What is the BMI of LeBron who is 1.8 meters tall and weighs 180 kilograms?

A. 100 B. 10 C. 1 D. 0.10 E. 0.05

21. The table shows how OUT values are related to IN numbers. Which rule tells how to find the OUT number for any IN number, X?

IN	OUT
4	9
6	13
20	41
X	?



A. $X + 5$ B. $2(X + 1)$
C. $(X+1) + X$ D. $2(X - 1)$

22. Prof Reid is buying a new fuel efficient Honda Prius as his family car. Rounded to the nearest thousand, it costs \$23,000. How many amounts of money in the box could be the price of his new car?

\$23,099	\$22,510	\$23,810
\$24,199	\$23,256	\$22,099

A. none B. one C. two D. three E. four

23. Which statement is correct?

- I The sum of any two odd numbers is an odd number.
- II The product of any two odd numbers is an odd number.

A. Only I B. Only II C. Both I and II D. Neither I nor II

24. $\frac{X}{10}$ is between $\frac{1}{5}$ and .6 What could the value of X be?

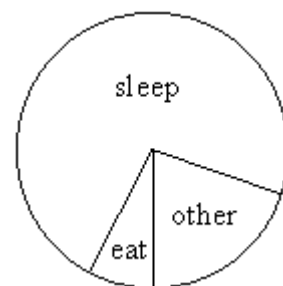
A. 1 B. 2 C. 5 D. 8 E. 10

25. The ratio of females to males in the Early Childhood and Childhood Education classes is 20:1. This term there are 80 females taking Ed 44 or Ed 44.1. About how many males are in these classes?

A. 1 B. 4 C. 8 D. 20 E. 1,600

26. About how much of the day is Karen's cat awake?

A. 50% B. 30% C. 66% D. 74% E. 90%

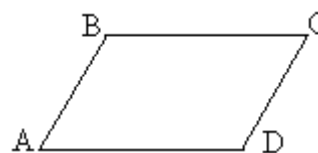


27. The product of three numbers is 0.124. Two of them are 0.1 and $\frac{2}{10}$. What is the third number?

A. 0.62 B. 6.2 C. 0.124 D. 0.24 E. 2.4

28. Which statement is correct about this shape?

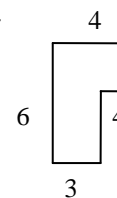
- I It has two obtuse angles
- II Its two diagonals will be equal in length
- III It is a prism



A. Only I B. Only II C. Only III D. Only I and II E. I, II, and III

29. June is buying metallic red tile for her film studio. Tile costs \$5 per square foot. How much must June spend to tile her film studio?

A. \$80 B. \$100 C. \$140 D. \$200 E. \$220

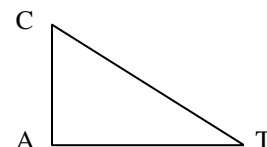


30. Barbara buys a new computer at PCWorld in New Jersey. It was on sale for 30% off. She also got an additional \$50 off because she was a teacher. How much did she pay for the computer, including the 5% sales tax?



A. \$700.00 B. \$735.00 C. \$650.00 D. \$682.50 E. \$938.50

31. Side AT of the right triangle CAT is 3cm long. The hypotenuse is 5cm long. How many square centimeters is the area of CAT?

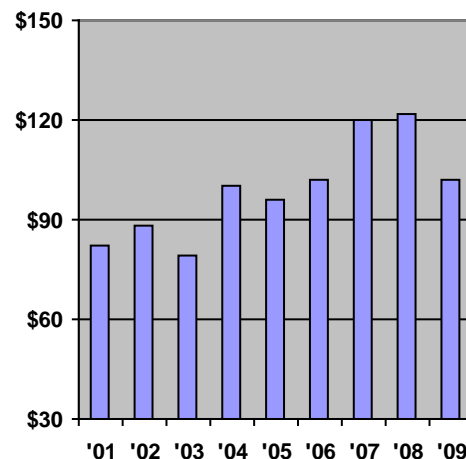


A. 4 B. 6 C. $7\frac{1}{2}$ D. 12 E. 60

32. Do you spend money on Valentine's day? Based on the graph, which statement is NOT correct?

A Cheaper Holiday

Average consumer spending on Valentine's Day is expected to be lower than the previous two years, according to a National Retail Federation survey.



- A. Spending increased from 2006 to 2007.
 B. Spending in 2005 was less than spending in the year before that.
 C. Spending in 2007 was about \$120 per person.
 D. Spending decreased by almost \$50 from 2008 to 2009.
 E. Spending in 2009 was about the same as spending in 2004.

33. Estimate this quotient:

$$197 \overline{) 799}$$

A. 800 B. 40 C. 4 D. 2 E. 8

34. Lucy rearranges 3 cutout letters C, A, T to make different 3-letter "words" like "ATC". Using each letter once in a "word" how many different 3-letter "words" can she make?
 A. 3 B. 6 C. 9 D. 12

35. Which is NOT a property of a cube?

A. it has 6 faces B. it has 6 corners C. it has 12 edges D. it has 8 vertices

Answer Key

1C	2C	
3C	4.B	5C
6B	7D	8D
9A	10D	11C
12D	13A	14D
15B	16C	17B
18C	19A	20A
21 <u>C</u>	22D	23B
24C	25B	26B
27B	28A	29B
30D	31B	32D
33C	34B	35B