

1. Which of the following values is NOT equal to  $34(58+9)$ ?

- A.  $34 \times 67$
- B.  $58(34+9)$
- C.  $34 \times 58 + 34 \times 9$
- D.  $1,972 + 306$

2. If 5 ounces is equal to 140 grams, then 2 pounds of ground meat is equal to how many grams?

- A. 863
- B. 878
- C. 896
- D. 915

3. Which of the following is equal to  $5.93 \times 10^{-2}$ ?

- A. 0.0593
- B. 0.00593
- C. 593
- D. 5930

4. On a Map, 1 inch represents 20 miles. The distance between 2 towns is  $6\frac{1}{5}$  inches. How many miles are actually between the two towns?

- A. 65 miles
- B. 84 miles
- C. 124 miles
- D. 138 miles

5. Sarah is twice as old as her youngest brother. If the difference between their ages is 15 years. How old is her youngest brother?

- A. 10
- B. 15
- C. 20
- D. 25

6. Which of the following fractions is equal to  $\frac{5}{6}$ ?

- A.  $\frac{20}{30}$
- B.  $\frac{15}{24}$
- C.  $\frac{25}{30}$
- D.  $\frac{40}{54}$

7. The number of milliliters in 1 liter is

- A. 10,000
- B. 1,000
- C. 0.1
- D. 0.01

8. What is  $\frac{1}{9}$  of 9?

- A.  $\frac{1}{9}$
- B. 0
- C. 1
- D. 2

9. In his pocket, a boy has 3 red marbles, 4 blue marbles, and 4 green marbles. How many will he have to take out of his pocket to ensure that he has taken out at least one of each color?

- A. 11
- B. 7
- C. 8
- D. 9

10. Which fraction is equal to 0.20%?

- A.  $\frac{1}{500}$
- B.  $\frac{1}{40}$
- C.  $\frac{1}{50}$
- D.  $\frac{1}{400}$

11. Saleem can type a 20 page document in 40 minutes, Aysha can type it in 30 minutes, and Raheel can type it in 24 minutes. Working together, how much time will it take them to type the same document?

- A. 5 minutes
- B. 10 minutes
- C. 18 minutes
- D. 20 minutes

12. Of the following fractions, which is less than  $\frac{2}{3}$ ?

- A.  $\frac{7}{8}$
- B.  $\frac{5}{6}$
- C.  $\frac{3}{4}$
- D.  $\frac{3}{5}$

13. A hockey team won 6 games and lost 8. What is the ratio of wins to number of games?

- A.  $\frac{6}{8}$
- B.  $\frac{8}{6}$
- C.  $\frac{3}{7}$
- D.  $\frac{8}{14}$

14. If the perimeter of a rectangular house is  $25\frac{1}{3}$  yards, and the length is 22 feet. What is the width?

- A. 16 feet
- B. 35 feet
- C. 37 feet
- D. 40 feet

15. A recent study showed that an increase in body weight by 10 kilograms resulted in a 0.15% increase in heart disease. What fraction is equal to 0.15%?

- A.  $\frac{3}{2000}$
- B.  $\frac{2}{750}$
- C.  $\frac{7}{4000}$
- D.  $\frac{5}{3462}$

16.  $6.334 \times 10^4 =$

- A. 0.0006334
- B. 0.06334
- C. 6334
- D. 63340

17. Which of the following would be an appropriate unit to measure sugar for a cookie recipe?

- A. liters
- B. cups
- C. quarts
- D. kilograms

18. The average of three numbers is V. If one of the numbers is Z and another is Y, what is the remaining number?

- A.  $ZY - V$
- B.  $\frac{Z}{V} - 3 - Y$
- C.  $\frac{Z}{3} - V - Y$
- D.  $3V - Z - Y$

19. Two cyclists start biking from a trail's start 3 hours apart. The second cyclist travels at 10 miles per hour and starts 3 hours after the first cyclist who is traveling at 6 miles per hour. How much time will pass before the second cyclist catches up with the first from the time the second cyclist started biking?

- A. 2 hours
- B.  $4 \frac{1}{2}$  hours
- C.  $5 \frac{3}{4}$  hours
- D. 6 hours

20. Jamil can fill a pool carrying buckets of water in 30 minutes. Sue can do the same job in 45 minutes. Tony can do the same job in  $1 \frac{1}{2}$  hours. How quickly can all three fill the pool together?

- A. 12 minutes
- B. 15 minutes
- C. 21 minutes
- D. 23 minutes

21. Maria is reviewing her algebra quiz. She has determined that one of her solutions is incorrect. Which one is it?

- A.  $t - 2t - 3t = 32$   $t = 8$
- B.  $p - 3(p-5) = 10$   $p = 2.5$
- C.  $4y + 3y = 28$   $y = 4$
- D.  $5w + 6w - 3w = 64$   $w = 8$

22. What simple interest rate will Susan need to secure to make \$2,500 in interest on a \$10,000 principal over 5 years?

- A. 4%
- B. 5 %
- C. 6%
- D. 7%

23. Given:  $a = i + j + k$ ,  $a \cdot b = 1$  and  $a \times b = j - k$ . Then,  $b$  is equal to

- A.  $-2i$
- B.  $2i + k$
- C.  $3j$
- D.  $i$

24. Consider points A , B , C and D with position vectors  $7i - 4j + 7k$  ,  $i - 6j + 10k$  ,  $-i$  ,  $3j + 4k$  and  $5i - j + 5k$  respectively. Then ABCD is a

- A. rhombus
- B. rectangle
- C. parallelogram but not a rhombus
- D. none

25. The value of a number is five times the sum of its digits. Find the number.

- A. 35
- B. 45
- C. 55
- D. 65

26. What is the equivalent of 110 in Roman numerals?

- A. XC
- B. CX
- C. LX
- D. DX

27.  $2 + \{4 + (8 - 5 - 3)\} = ?$

- A. 6
- B. 16
- C. 12
- D. 7

28.  $5*2$  is a three digit number with \* as a missing digit. If the number is divisible by 6, the missing digit is?

- A. 2
- B. 3
- C. 6
- D. 7

29. If Rank of a matrix is equal to No. of variable then it have

- A. Non-Trivial solution ,  $x = y = z \neq 0$
- B. Trivial Solution ,  $x = y = z = 0$
- C.  $x = y = 0$  ,  $z \neq 0$
- D. None

30. LCM of 10,16 and 25=?

- A. 400
- B. 200
- C. 20
- D. 160

31. If the value of  $x$  lies between 0 & 1 which of the following is the largest?

- A.  $x$
- B.  $x^2$
- C.  $-x$
- D.  $1/x$

32. If 42 men can do a work in 15 days, how many men are required to complete it in 21 days?

- A. (a) 24
- B. (b) 36
- C. (c) 30
- D. (d) none of these

33. The sum of all possible two digit number formed from three different one digit natural number when divided by the sum of the original three number is equal to:?

- A. 18
- B. 22
- C. 36
- D. none of these

34. In the first 10 over of a cricket game, the run rate was only 3.2. What should be the run rate in the remaining 40 over to reach the target of 282 run?

- A. 6.25
- B. 6.5
- C. 6.75
- D. 7

35. There are four prime no written in ascending order. The product of the first three is 385 and that of the last three is 1001. The last no is?

- A. 11
- B. 13
- C. 17
- D. 19

36. What is  $\frac{1}{3}$  of the difference of 90 and 36/

- A. 10
- B. 18
- C. 15
- D. 14

37. For  $x > 0$ ,  $\lim_{x \rightarrow 0} x \cdot \left[ \left( \frac{1}{x} \right) \tan x \right]$  is equal to

- A. 2
- B. 1
- C. 0
- D. -1

38. The angle between the two tangents to the parabola  $y^2 = 4x$  drawn from the point (1, 4) is

- A.  $\frac{\pi}{4}$
- B.  $\frac{\pi}{6}$
- C.  $\frac{\pi}{2}$
- D.  $\frac{\pi}{3}$

39. You are having 31kg of rice. You are provided with a 1kg stone for weighing. In how many weights the 31kg of rice can be weighed.

- A. 6
- B. 34
- C. 63
- D. 5

40. The mode of the nos. 7,7,7,9,10,11,11,11,12 is

- A. 11
- B. 7
- C. 7 & 11
- D. None of Above

41. L.C.M &H.C.F The L.C.M. (Lowest (or Least) Common Multiple) of two numbers is 45 times to their H.C.F (Highest Common Factor). If one of the numbers is 125 and sum of L.C.M. and H.C.F. is 1150, the other number is:

- A. 215
- B. 220
- C. 225
- D. 235

42. The cost of an item is Rs 12.60. If the profit is 10% over selling price what is the selling price?

- A. 10.86
- B. 18.56
- C. 15.86
- D. 13.86

43. If we write all the whole no from 200 and 400, then how many of these contain the digit 7 once and only once.

- A. 32
- B. 34
- C. 35
- D. 36

44. The sum of the three prime no is 100.If one of then exceed another by 36, then one of the?

- A. 7
- B. 29
- C. 41
- D. 67

45. In the numerals 0 to 99 which is the least repeated digit?

- A. 9
- B. 1
- C. 0
- D. 7

46. When a number is divided by 13, the remainder is 11.When the same number is divided by 17; the remainder by 9.What is the number?

- A. 339
- B. 349
- C. 369
- D. data inadequate

47. If the upper triangular matrixes have diagonal elements 2, 4, 8 then eigen value of this upper triangular matrix is

- A. 2, 4, 8
- B. 2, 4, 6
- C. 7, 5, 6
- D. 9, 10, 4

48. If two set have no element common, they are called

- A. Disjoint sets
- B. Overlapping sets
- C. Complementary sets
- D. Equivalent sets

49.  $\{2,3,5,7,11, \dots\}$  represent the first five

- A. Positive odd number
- B. Odd natural number
- C. Prime number
- D. Positive even number

50. Thirty men take 20 days to complete a job working 9 hours a day. How many hours a day should 40 men work to complete the job?

- A. 8 hrs
- B.  $7 \frac{1}{2}$  hrs
- C. 7 hrs
- D. 9 hrs

51. Six bells commence tolling together and toll at intervals 2,4,6,8,10 and 12 seconds respectively. In 30 minutes how many times they toll together.

- A. 4
- B. 10
- C. 15
- C. 16

52. The mean of a binomial distribution is 3 and its variance is  $\frac{3}{2}$ . Then the number of trials is?

- A. 6
- B. 2
- C. 3
- D. 5

53. There are 12 yes or no questions. How many ways can these are answered?

- A. 1024
- B. 2048
- C. 4096
- D. 144

54. A 4 cm cube is cut into 1 cm cubes. What is the percentage increase in the surface area after such cutting?

- A. 4%
- B. 300%
- C. 75%
- D. 400%

55. Simple and compound interest at what rate percent compound interest does sum .of money became four fold in 2 yrs?

- A. 25%
- B. 50%
- C. 100%
- D. 10%

56. A man loses 20% of his money and after spending 70% of the remainder he is left with Rs. 270. Originally he had :

- A. Rs. 1125
- B. Rs. 1225
- C. Rs. 1325
- D. Rs. 1500

57. If  $x\%$  of an hour is 2 minutes,  $x$  is equal to:

- A.  $3\frac{1}{3}\%$
- B.  $2\frac{3}{4}\%$
- C.  $3\frac{2}{3}\%$
- D.  $4\frac{7}{8}\%$

58. A number is increased by 10% and then reduced by 10%, then the number :

- A. Doesn't change
- B. decreases by 1%
- C. increases by 1%
- D. none of these

59. Ravi's salary was reduced by 25%. Percentage increase to be effected to bring the salary to the original level is

- A. 20%
- B. 25%
- C.  $33 \frac{1}{3}\%$
- D. 30%

7. What is 25% of 25% is?

- A. 50
- B. 6.25
- C. 0.0625
- D. 625

60. If  $x$  and  $y$  are positive integer such that  $(3x+7y)$  is a multiple of 11, then which of the following will also be divisible by 11?

- A.  $4x+6y$
- B.  $x+y+4$
- C.  $9x+4y$
- D.  $4x-9y$

61. If  $6x^4 - 46y^9 = 46y^9 - 1904$ , which of the following should come in place of  $x$ ?

- A. 4
- B. 6
- C. Cannot be determined
- D. None of these

62. What is the product of the irrational roots of the equation  $(2x-1)(2x-3)(2x-5)(2x-7)=9$ ?

- A.  $\frac{3}{2}$
- B. 4
- C. 3
- D.  $\frac{3}{4}$

63. If  $x : y = 3 : 4$ , then  $(2x+3y) : (3y-2x) =$

- A. 2:1
- B. 4:1
- C. 3:2
- D. 3:1

64. The present ages of three persons are in proportions 4 : 7 : 9. Eight years ago, the sum of their ages was 56. Find their present ages (in years)

- A. 20, 35, 45
- B. 8, 20, 28
- C. 16, 28, 36
- D. 20, 36, 46

65. Which of the following is not a rational number?

- A. -4
- B.  $\frac{1}{5}$
- C. 0.8333333.....
- D.  $\sqrt{2}$

66. A study reported that in a random sampling of 100 women over the age of 35 showed that 8 of the women were married 2 or more times. Based on the study results, how many women in a group of 5,000 women over the age of 35 would likely be married 2 or more times?

- A. 55
- B. 150
- C. 200
- D. 400

67. Jamil is traveling to a meeting that is 28 miles away. He needs to be there in 30 minutes. How fast does he need to go to make it to the meeting on time?

- A. 56 mph
- B. 37 mph
- C. 41 mph
- D. 49 mph

68. If Saleem can mix 20 drinks in 5 minutes, Sue can mix 20 drinks in 10 minutes, and Jack can mix 20 drinks in 15 minutes, how much time will it take all 3 of them working together to mix the 20 drinks?

- A. 2 minutes and 44 seconds
- B. 2 minutes and 58 seconds
- C. 3 minutes and 10 seconds
- D. 3 minutes and 26 seconds

69. If Sami can do a job in 4 days that Lisa can do in 6 days and Tom can do in 2 days, how long would the job take if Sam, Lisa, and Tom worked together to complete it?

- A. 0.8 days
- B. 1.09 days
- C. 1.23 days
- D. 1.65 days

70. Jamil has 5 pieces of string. He needs to choose the piece that will be able to go around his 36-inch waist. His belt broke, and his pants are falling down. The piece needs to be at least 4 inches longer than his waist so he can tie a knot in it, but it cannot be more than 6 inches longer so that the ends will not show from under his shirt. Which of the following pieces of string will work the best?

- A. 3 feet
- B.  $3\frac{3}{4}$  feet
- C.  $3\frac{1}{2}$  feet
- D.  $3\frac{1}{4}$  feet

71. The last week of a month a car dealership sold 12 cars. A new sales promotion came out the first week of the next month and the sold 19 cars that week. What was the percent increase in sales from the last week of the previous month compared to the first week of the next month?

- A. 58%
- B. 119%
- C. 158%
- D. 175%

72. If two planes leave the same airport at 1:00 PM, how many miles apart will they be at 3:00 PM if one travels directly north at 150 mph and the other travels directly west at 200 mph?

- A. 50 miles
- B. 100 miles
- C. 500 miles
- D. 700 miles

73. During a 5-day festival, the number of visitors tripled each day. If the festival opened on a Thursday with 345 visitors, what was the attendance on that Sunday?

- A. 9,315
- B. 1,035
- C. 1,725
- D. 3,105

74. Type a page in  $p$  minutes, what piece of the page can she do in 5 minutes?

- A.  $5/p$
- B.  $p - 5$
- C.  $p + 5$
- D.  $p/5$

75. If Sally can paint a house in 4 hours, and John can paint the same house in 6 hour, how long will it take for both of them to paint the house together?

- A. 2 hours and 24 minutes
- B. 3 hours and 12 minutes
- C. 3 hours and 44 minutes
- D. 4 hours and 10 minutes

76. If Leah is 6 years older than Saleem and Jamil is 5 years older than Leah, and the total of their ages is 41. Then how old is Sue?

- A. 8
- B. 10
- C. 14
- D. 19

77. Jamil has 16 jellybeans in her pocket. She has 8 red ones, 4 green ones, and 4 blue ones. What is the minimum number of jellybeans she must take out of her pocket to ensure that she has one of each color?

- A. 4
- B. 8
- C. 12
- D. 13

78. If 300 jellybeans cost you  $x$  dollars. How many jellybeans can you purchase for 50 cents at the same rate?

- A.  $150/x$
- B.  $150x$
- C.  $6x$
- D.  $1500/x$

79.  $7 \frac{1}{2} - 5 \frac{3}{8} =$

- A.  $1 \frac{1}{2}$
- B.  $1 \frac{2}{3}$
- C.  $2 \frac{1}{8}$
- D.  $3 \frac{1}{4}$

80. You need  $\frac{4}{5}$  cups of water for a recipe. You accidentally put  $\frac{1}{3}$  cups into the mixing bowl with the dry ingredients. How much more water in cups do you need to add?

- A.  $\frac{1}{3}$  cups
- B.  $\frac{2}{3}$  cups
- C.  $\frac{1}{15}$  cups
- D.  $\frac{7}{15}$  cups

81. Which of these numbers is a factor of 21

- A. 2
- B. 5
- C. 7
- D. 42

82. If the average person drinks 8, (8oz) glasses of water per day, a person who drinks 12.8 oz of water after a morning exercise session has consumed what fraction of the daily average?

- A.  $\frac{1}{3}$
- B.  $\frac{1}{5}$
- C.  $\frac{1}{7}$
- D.  $\frac{1}{9}$

83. There are 8 ounces in a  $\frac{1}{2}$  pound. How many ounces are in  $7\frac{3}{4}$  lbs?

- A. 12 ounces
- B. 86 ounces
- C. 119 ounces
- D. 124 ounces

84. Solve:  $0.25 + 0.65$

- A.  $\frac{1}{2}$
- B.  $\frac{9}{10}$
- C.  $\frac{4}{7}$
- D.  $\frac{2}{9}$

85. To which of the following?

- A. 100,000
- B.  $0.1 \times 10^5$
- C.  $10 \times 10 \times 10 \times 10$
- D.  $10^2 \times 10^2$

86. Multiply  $10^4$  by  $10^2$

- A.  $10^8$
- B.  $10^2$
- C.  $10^6$
- D.  $10^{-2}$

87. Find  $8.23 \times 10^9$

- A. 0.00000000823
- B. 0.000000823
- C. 8.23
- D. 8230000000

88. 83,000 equals:

- A.  $83.0 \times 10^4$
- B.  $8.3 \times 10^4$
- C.  $8.3 \times 10^3$
- D.  $83.0 \times 10^5$

89. .00875 equals:

- A.  $8.75 \times 10^{-2}$
- B.  $8.75 \times 10^{-3}$
- C.  $8.75 \times 10^{-4}$
- D.  $87.5 \times 10^{-3}$

90. In the number 743.25 which digit represents the tenths space?

- A. 2
- B. 3
- C. 4
- D. 5

91. What is the mathematical average of the number of weeks in a year, seasons in a year, and the number of days in January?

- A. 29
- B. 33
- C. 32
- D. 31

92. What is the median of the following list of numbers? 4, 5, 7, 9, 10, 12

- A. 6
- B. 7.5
- C. 7.8
- D. 8

93. What is the absolute value of -9?

- A. -9
- B. 9
- C. 0
- D. -1

94. Subtract the following numbers rounded to the nearest tenths place.  
134.679, -45.548, -67.8807

- A. 21.3
- B. 21.25
- C. -58.97
- D. -59.0

95. What are 1230.932567 rounded to the nearest hundredths place?

- A. 1200
- B. 1230.9326
- C. 1230.93
- D. 1230

96. Round 907.457 to the nearest tens place.

- A. 908.0
- B. 910
- C. 907.5
- D. 900

97. A roast was cooked at 325° F in the oven for 4 hours. The internal temperature rose from 32° F to 145° F. What was the average rise in temperature per hour?

- A. 20.2° F/hr
- B. 28.25° F/hr
- C. 32.03° F/hr
- D. 37° F/hr

98. At a certain high school, the respective weights for the following subjects are:

Mathematics 3, English 3, History 2, Science 2 and Art 1.

What is a student's average whose marks were the following: Geometry 89, American Literature 92, American History 94, Biology 81, and Sculpture 85?

- A. 85.7
- B. 87.8
- C. 88.9
- D. 89.4

99. If Jack needs 2 ½ pints of cream to make a dessert. How many pints will he need to make 3 desserts?

- A. 2 ½
- B. 3
- C. 4
- D. 7 ½

100. If a  $\frac{1}{4}$  of a teaspoon is 1 ml, then how many milliliters are in 6 teaspoons?

- A. 10 ml
- B. 12.5 ml
- C. 20 ml
- D. 24 ml

101. A scale on a map states that every  $\frac{1}{4}$  of an inch represents 20 miles. If two cities are  $3\frac{1}{2}$  inches apart, how many miles are actually between the two cities?

- A. 14 miles
- B. 20 miles
- C. 230 miles
- D. 280 miles

102. Michelle wants to expand her flowerbed by increasing the length and width each by 2 ft. What will the new area of the flowerbed be, if L and W represent the original dimensions of the flowerbed's length and width?

- A.  $2LW$
- B.  $2(L+W)$
- C.  $2L + 2W$
- D.  $(L+2)(W+2)$

103. Which of the following fractions are correctly placed from the least in value to the greatest in value?

- A.  $\frac{1}{4}$ ,  $\frac{17}{25}$ ,  $\frac{3}{4}$ ,  $\frac{11}{16}$
- B.  $\frac{17}{25}$ ,  $\frac{1}{4}$ ,  $\frac{11}{16}$ ,  $\frac{3}{4}$
- C.  $\frac{1}{4}$ ,  $\frac{17}{25}$ ,  $\frac{11}{16}$ ,  $\frac{3}{4}$
- D.  $\frac{1}{4}$ ,  $\frac{17}{25}$ ,  $\frac{3}{4}$ ,  $\frac{11}{16}$

104. What is the mathematical average of the number of days in a typical year, the number of days in a week, and the number of hours in a day?

- A. 100
- B. 115
- C. 132
- D. 158

105.  $1.75 \times 10^5 =$

- A. 175,000
- B. 17,500
- C. 1,750
- D. 0.00175

106. On a map,  $\frac{1}{3}$  inch equals 15 miles. The distance between two towns on a map is  $3\frac{2}{3}$  inches. How many miles are actually between the two towns?

- A. 11
- B. 16
- C. 88
- D. 165

107. 85% of what number is 136?

- A. 160
- B. 170
- C. 180
- D. 190

108. A building that is 150 ft tall casts a shadow of 20 feet long. At the same time a tree casts a shadow of 2 ft. How tall is the tree?

- A. 10
- B. 15
- C. 20
- D. 25

109. Which of the following is a true statement?

- A. The product of two negative numbers is negative.
- B. The product of one negative and one positive number is positive.
- C. When dividing a positive number by a negative number, the results are negative.
- D. When dividing a negative number by a positive number, the results are positive.

110. What is the fractional equivalent of 12.5%?

- A.  $\frac{1}{4}$
- B.  $\frac{2}{9}$

- C.  $\frac{1}{5}$
- D.  $\frac{1}{8}$

111. Change  $4\frac{3}{5}$  to an improper fraction.

- A.  $\frac{23}{5}$
- B.  $\frac{7}{5}$
- C.  $\frac{12}{20}$
- D.  $\frac{20}{12}$

112. Bilal started a race at 6:30 A.M., and he did not cross the finish line until 1:05 P.M. How long did it take for Brett to finish the race?

- A. 6 hours and 15 minutes
- B. 6 hours and 35 minutes
- C. 7 hours and 5 minutes
- D. 7 hours and 15 minutes

113. Multiply  $2.345 \times 0.023$

- A. 0.53935
- B. 0.053935
- C. 0.0053935
- D. 10.195652

114. A men's basketball team won 24 games and lost 32. What is the ratio of games lost to the number of games played?

- A. 32:24
- B. 4:3
- C. 3:4
- D. 4:7

115. Which of the following choices is equivalent to  $\frac{5}{6}$ ?

- A.  $\frac{5}{12}$
- B.  $\frac{10}{6}$
- C.  $\frac{20}{30}$
- D.  $\frac{15}{18}$

116. If one side of a square is 5 units, what is the area of the square?

- A. 10
- B. 15

- C. 20
- D. 25

117. If the average arithmetic mean of 8, 12, 15, 21,  $x$  and 11 is 17 then what is  $x$ ?

- A. 3
- B. 15
- C. 17
- D. 35

118. Which of the following has the least value?

- A. 0.27
- B.  $\frac{1}{4}$
- C.  $\frac{3}{8}$
- D. 11%

119. If  $8x + 5x + 2x + 4x = 114$ , the  $5x + 3 =$

- A. 12
- B. 25
- C. 33
- D. 47

120. If 6 is 24% of a number, what is 40% of the same number?

- A. 8
- B. 10
- C. 15
- D. 20

121. If a match box is 0.17 feet long, what is its length in inches the most closely comparable to the following?

- A.  $5 \frac{1}{16}$  inch highlighter
- B.  $3 \frac{1}{8}$  inch jewelry box
- C.  $2 \frac{3}{4}$  inch lipstick
- D.  $2 \frac{3}{16}$  inch staple remover

122. Of the following units which would be more likely used to measure the amount of water in a bathtub?

- A. kilograms
- B. liters
- C. milliliters
- D. centigrams

123. At a company fish fry,  $\frac{1}{2}$  in attendance are employees. Employees' spouses are  $\frac{1}{3}$  of the attendance. What is the percentage of the people in attendance who are not employees or employee spouses?

- A. 10.5%
- B. 16.7%
- C. 25%
- D. 32.3%

124. The last week of a month a car dealership sold 12 cars. A new sales promotion came out the first week of the next month and the sold 19 cars that week. What was the percent increase in sales from the last week of the previous month compared to the first week of the next month?

- A. 58%
- B. 119%
- C. 158%
- D. 175%

125. If two planes leave the same airport at 1:00 PM, how many miles apart will they be at 3:00 PM if one travels directly north at 150 mph and the other travels directly west at 200 mph?

- A. 50 miles
- B. 100 miles
- C. 500 miles
- D. 700 miles

126. What is the cost in dollars to steam clean a room  $W$  yards wide and  $L$  yards long if the steam cleaners charge 10 cents per square foot?

- A.  $0.9WL$
- B.  $0.3WL$
- C.  $0.1WL$
- D.  $9WL$

127. If 300 jellybeans cost you  $x$  Rupees. How many jellybeans can you purchase for 50 Paisa at the same rate?

- A.  $150/x$
- B.  $150x$
- C.  $6x$
- D.  $x/6$

128. A railway half ticket costs half the full fare and the reservation charge is the same on half ticket as on full ticket. One reserved first class ticket from Chennai to Trivandrum costs Rs. 216 and one full and one half reserved first class tickets cost Rs. 327. What is the basic first class full fare and what is the reservation charge?

- A. Rs. 105 and Rs. 6
- B. 216 and Rs. 12
- C. 210 and Rs. 12
- D. 210 and Rs. 6

129. A focus of an ellipse is at the origin. The directrix is the line  $x = 4$  and the eccentricity is  $1/2$ . Then the length of the semi-major axis is

- (a)  $4/3$
- (b)  $8/3$
- (c)  $7/3$
- (d)  $5/3$

130. A parabola has the origin as its focus and the line  $x = 2$  as the directrix. Then the vertex of the parabola is at

- (a)  $(0, 2)$
- (b)  $(0, 1)$
- (c)  $(1, 0)$
- (d)  $(2, 0)$

131. The conjugate of a complex number is  $1/i-1$ . Then the complex number is

- (a)  $-1/i-1$
- (b)  $1/i+1$
- (c)  $1/i-1$
- (d)  $-1/i+1$

132. The mean of the numbers  $a, b, 8, 5, 10$  is 6 and the variance is 6.80. Then which one of the following gives possible values of  $a$  and  $b$ ?

- A.  $a = 0, b = 7$
- B.  $a = 5, b = 2$
- C.  $a = 3, b = 4$
- D.  $a = 2, b = 4$

133. The line passing through the points  $(5, 1, a)$  and  $(3, b, 1)$  crosses the  $yz$ -plane at the point  $(0, 17/2, -13/2)$  Then

- A.  $a = 2, b = 8$
- B.  $a = 4, b = 6$
- C.  $a = 6, b = 4$
- D.  $a = 8, b = 2$

134. If  $9x-3y=12$  and  $3x-5y=7$  then  $6x-2y = ?$

- A. -5
- B. 4
- C. 2
- D. 8