

Brilliant Public School , Sitamarhi



Class -VII

Mathematics

Sitamarhi Talent Search

Session : 2012-13

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Class: VII Maths

I. FRACTIONS & DECIMALS

- 1 The fraction $(p+q)/q$ equals
a) p b) $p/q + q$ c) $p/q + 1$ d) $p/q + p$
- 2 One side of a square $2/a$, its perimeter is
a) $4/a$ b) $4/a^2$ c) $8/a$ d) $8/a^2$
- 3 Product of $5/7 \times 3/5 \times 2/5 \times 5$ is equal to a
a) 3 b) $11/7$ c) $36/7$ d) $6/7$
- 4 Write in descending order $4/5, 2/3, 1/2, 3/4$
a) $4/5 > 2/3 > 1/2 > 3/4$ b) $1/2 > 2/3 > 4/5 > 3/4$ c) $3/4 > 1/2 > 4/5 > 2/3$ d) $4/5 > 3/4 > 2/3 > 1/2$
- 5 Reciprocal of $1 \frac{3}{11}$
a) $11/13$ b) $11/10$ c) $11/9$ d) $11/14$
- 6 Which of the fraction is not equal to the other three
a) $2/5$ b) $26/65$ c) $14/35$ d) $34/68$
- 7 Simplify $3 \frac{1}{4} + 1/2 \div 3/4 - 1/2 \times 3 \frac{1}{2}$
a) $2 \frac{1}{6}$ b) $3 \frac{1}{6}$ c) $2 \frac{1}{5}$ d) $3 \frac{1}{5}$
- 8 $(2/5 + 3/5) \div (7/5 - 4/10)$
a) 1 b) 0 c) $3/5$ d) $5/7$
- 9) When simplified the product $(2 - 1/3)(2 - 3/5)(2 - 5/7)(2 - 17/19)$
a) $21/9$ b) $23/3$ c) $19/17$ d) none
- 10) The value of $1/2$ of $(3/4 \div 2/3)$ is
a) $3/16$ b) $9/16$ c) $3/6$ d) $9/4$
- 11 If $25 \times 32 = 800$ then $2.5 \times .32 =$
a) 0.800 b) 8.00 c) 80.0 d) .0800
- 12 $0.0302 \times 0.52 =$
a) 0.051704 b) 0.015407 c) 0.15704 d) none

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- 13 $0.04 + 404/1000 =$
a)0.0404 b)0.0444 c)444 d)0.444
- 14 $16.96 \div 400 =$
a)420 b)0.0424 c)420.04 d) 0.420
- 15 The value of $1.8/(0.4 \times 0.3)$ is
a)0.3/0.2 b)0.4/0.2 c)6/0.3 d)none
- 16 The value of $(0.5)^2 \times (0.1)^3$ is
a)25 b)0.00025 c)0.25 d)0.0025
- 17) If $43m = 0.086$ then m has the value
a)0.002 b)0.02 c)0.2 d)2
- 18) The result of adding the difference of 3.003 and 2.05 to their sum
a)6.006 b)60.06 c)600.6 d)0.6060
- 19) Find the average of 0.3, 3, 0.03, and 0.002 is
a)0.833 b)0.803 c)83.3 d)833
- 20) 0.089m in cm is
a)89 b)8.9 c)890 d)0.89

Answer Key

- | | | | |
|------|-------|-------|-------|
| 1) c | 6) d | 11) a | 16) b |
| 2) c | 7) a | 12) b | 17) a |
| 3) d | 8) a | 13) d | 18) a |
| 4) d | 9) d | 14) b | 19) a |
| 5) d | 10) b | 15) d | 20) b |

II . INTEGERS

21. The sum of two integers is -112. If one of them is -109 the other is
a) -121 b) -3 c) 3 d) none of these
22. -11,-8, -5, -2..... The next number in the series is
a) -1 b) 0 c) 1 d) -4
23. $0 \div (2 + 8) =$
a) 0 b) 10 c) -10 d) 6
24. An integer when divided by -3 gives quotient 35 and leaves remainder 2. The integer is
a) 32 b) 31 c) -34 d) -103
25. $(-12) \times 8 \times 5 - 2 \times 30 \times 12$
a) 1824 b) -1200 c) -164 d) 200
26. The product of two integers is 4 less than 49. If one of the integers is -9 the other integer is
a) 43 b) 40 c) -44 d) -5
27. A person gains Rs 2 on product x and loses Rs 3 on product y. If he sells 8 items of x and 5 items of y his profit or loss is
a) Profit of Re 1 b) Loss of Re 1 c) -2 d) neither profit nor loss
28. The average of the scores -38, 13, -32, 8 and -16 is
a) -65 b) 5 c) -13 d) 21
29. Which pair of numbers does not have a product equal to 36
a) $\{-4, -9\}$ b) $\{-3, -12\}$ c) $\{1/2, -72\}$ d) $\{1, 36\}$
30. What is the value of the expression $\{(-10) \div 2\} \times (-4)$?
a) 20 b) 2 c) -9 d) -12
31. How much is -8 less than -3 ?
a) 5 b) -5 c) 11 d) -11
32. If the expression $[(-43) \times 109]$ can also be written as $[a + (-387)]$, what is the value of 'a' ?
a) -4687 b) -4300 c) -3586 d) -3200
33. Difference between 43°C and -17°C is
a) -26°C b) -60°C c) 60°C d) 26°C
34. An insect crawls up 5cm every second on a 60cm vertical rod and then falls down 2cm over the next second. How many seconds will it take to climb the rod?
a) 20 b) 40 c) 60 d) 30

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- 35 A tanker contains 500 litres of water. Due to a small hole in the tanker, the quantity of water is decreasing at the rate of 9 litres every hour. What will be the quantity of water in litres in the tank after 10 hours?
a) 410 b) 491 c) 400 d) 90
- 36 Predecessor of successor of -21 is
a) -20 b) -19 c) -22 d) -21
- 37 The value of $[(-4) \times (-9) \times (-25)] \div [(-2) \times (-3) \times (-5)]$ is
a) 10 b) 20 c) 30 d) 40
- 38 A gardner plans to plant 630 trees in 21 rows each containing the same number of trees, then how many trees will be there in each row?
a) 300 b) 30 c) 21 d) 3
- 39 A place is 45 metre above sea level and another place is 25 meter below sea level. What is the difference of level in metres between the two places?
a) 70 b) 20 c) 60 d) -20
- 40 The difference of sum of even numbers and sum of odd numbers between 10 and 20 is
a) 3 b) 6 c) 15 d) 4

ANSWER KEY: (INTEGERS)

- 21)b 22)c 23)a 24)d 25)b 26) d 27) a 28) c 29) c 30)a
31)a 32)b 33)c 34)b 35)a 36)d 37)c 38) b 39)a 40)c

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III: Rational Numbers

- 41 For what value of 'a' the number $\frac{-11}{a}$ is not a rational number.
a) -1 b) 1 c) 0 d) 10
- 42 The product of two rational numbers is $\frac{-7}{8}$. If one of the numbers is $\frac{1}{-6}$. Find the other.
a) $\frac{37}{8}$ b) $\frac{-42}{8}$ c) $\frac{21}{4}$ d) $\frac{-7}{48}$
- 43 Find the value of $\frac{-9}{5} + \frac{-8}{5} \div \frac{5}{2} \times \frac{-5}{4}$.
a) -1 b) -3 c) 2 d) -8
- 44 The additive inverse of $\frac{-1}{3} - \frac{-1}{3}$ is _____.
a) $\frac{1}{3}$ b) 0 c) $\frac{-1}{3}$ d) None of these.
44. The sum of three rational numbers is $\frac{-1}{5}$. If two of the numbers are $\frac{3}{10}$ and $\frac{-2}{5}$, find the third number.
a) $\frac{-7}{10}$ b) $\frac{-11}{10}$ c) $\frac{2}{5}$ d) $\frac{-1}{10}$
- 45 The sum of three rational numbers is $\frac{-1}{5}$. If two of the numbers are $\frac{3}{10}$ and $\frac{-2}{5}$, find the third number.
a) $\frac{-7}{10}$ b) $\frac{-11}{10}$ c) $\frac{2}{5}$ d) $\frac{-1}{10}$
- 46 What is the quotient when a non-zero rational number is divided by its additive inverse.
a) 0 b) -1 c) 1 d) None of these
47. The sum of $\frac{7}{-3}$ and $\frac{5}{-6}$ is equal to the product of $\frac{-5}{3}$ and a number. Find the number.
a) $\frac{35}{6}$ b) $\frac{5}{3}$ c) $\frac{-25}{6}$ d) $\frac{19}{10}$
48. What number should be subtracted from $\frac{3}{7}$ to get $\frac{5}{7}$.
a) $\frac{-2}{7}$ b) $\frac{2}{7}$ c) $\frac{3}{5}$ d) $\frac{1}{7}$

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49. Product of $-1\frac{1}{7}$ and the reciprocal of $\frac{-2}{7}$ is _____.

- a) $\frac{2}{7}$ b) 4 c) 3 d) $\frac{1}{-2}$

50. Which of the following is not equivalent to $\frac{-6}{21}$.

- a) $\frac{20}{-70}$ b) $\frac{10}{-35}$ c) $\frac{-9}{24}$ d) $\frac{-26}{91}$

51. Find the additive inverse of $\frac{-2}{-13}$.

- a) $\frac{2}{13}$ b) $\frac{13}{2}$ c) $\frac{-13}{2}$ d) $\frac{-2}{13}$

52. For any rational number a,b,c ,which among the following is false.

- a) $a \times b = b \times a$ b) $a \times (b-c) = a \times b - a \times c$ c) $a \times (b \div c) = a \times b \div a \times c$
d) $a \times (b+c) = a \times b + a \times c$

53. Find the value: $\left[\frac{-2}{7} - \frac{5}{7}\right] \times \left[\frac{8}{3} \div \frac{4}{9}\right]$

- a) -6 b) $\frac{4}{7}$ c) $\frac{-6}{7}$ d) -2

54. From a rope of 40m50cm , pieces of equal size are cut. If each piece is $2\frac{1}{4}$ m long, find the number of pieces cut off?

- a) 15 b) 18 c) 22 d) 9

55. Divide the difference of $\frac{3}{7}$ and $\frac{2}{5}$ by the product of $\frac{4}{5}$ and $\frac{25}{2}$.

- a) $\frac{2}{7}$ b) $\frac{9}{35}$ c) $\frac{1}{350}$ d) $\frac{2}{75}$

56. _____ and _____ are reciprocals of itself.

- a) 0, 1 b) 0, -1 c) 1, -1 d) None of these

57. By what number should we multiply $\frac{-5}{4}$ to get $\frac{7}{2}$.

- a) $\frac{-35}{8}$ b) $\frac{-5}{14}$ c) $\frac{8}{-35}$ d) $\frac{-14}{5}$

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58. Divide the sum of $\frac{-1}{3}$ and $\frac{5}{6}$ by the sum of $\frac{1}{-4}$ and $\frac{3}{8}$.

- a) $\frac{1}{2}$ b) 6 c) 4 d) $\frac{1}{4}$

59. If $\frac{p}{q}$ and $\frac{r}{s}$ are rational numbers, then $\frac{p}{q}$ is multiplicative inverse of $\frac{r}{s}$ if,

- a) $\frac{p}{q} = \frac{r}{s}$ b) $\frac{p}{q} + \frac{r}{s} = 1$ c) $\frac{p}{q} \times \frac{r}{s} = 1$ d) $\frac{p}{q} + \frac{r}{s} = 0$

60. Subtract $-\frac{3}{5}$ from its reciprocal.

- a) $\frac{-16}{15}$ b) $\frac{-34}{15}$ c) $\frac{-29}{9}$ d) $\frac{8}{15}$

ANSWERS

41) c 42) c 43) a 44) b 45) d 46) b 47) d 48) a

49) b 50) c 51) d 52) c 53) a 54) b 55) c 56) c

57) d 58) c 59) c 60) a

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IV .Triangle and its properties

61. Which is the longest side of triangle ABC right angled at A
a).AC b. BC c. AB d. None of these
62. One of the angles of a triangle is 74° and the other two angles are equal. Find the measure of each of the equal angles
a. 58° b. 100° c. 53° d. 116°
63. Which of the following can be the sides of a right triangle.
a. 4cm, 5cm, 6cm b. 2.5cm, 6cm, 1.5cm.
c. 1.5cm, 2cm, 2.5cm d. 5cm, 6cm, 7cm
64. One of the exterior angles of a triangle is 72° and its interior opposite angles are in the ratio 4:5. The angles of the triangle are.
a. $32^\circ, 40^\circ$ b. $30^\circ, 42^\circ$ c. $28^\circ, 44^\circ$ d. $50^\circ, 22^\circ$
65. The perpendicular line segment from a vertex of a triangle to its opposite side is called
a. Median b. diagonal c. Base d. Altitude
66. XYZ is a triangle right angled at 'Y'. If $XZ = 25\text{cm}$, $YZ = 7\text{cm}$, XY is
a. 38cm b. 26cm c. 23cm d. 24cm
67. Angle A and B of a triangle ABC are 35° and 55° . Write which of the following is true
a. $AB^2 + BC^2 = AC^2$ b. $AC^2 + BC^2 = AB^2$
c. $AB + AC^2 = BC^2$ d. None of these
68. In a triangle ABC, if $\angle A = x$, $\angle B = 2x$, $\angle C = 3x$, then the three angles are
a. $50^\circ, 60^\circ, 70^\circ$ b. $40^\circ, 60^\circ, 80^\circ$ c. $45^\circ, 45^\circ, 90^\circ$ d. $30^\circ, 60^\circ, 90^\circ$
69. Two angles of a triangle are in the ratio ($2/3 : 3/2$) and the third angle is 50° , then two angles are
a. $40^\circ, 90^\circ$ b. $45^\circ, 85^\circ$ c. $30^\circ, 100^\circ$ d. $35^\circ, 95^\circ$
70. If an exterior angle of a triangle is 108° and one of the interior opposite angle is 38° . The other interior opposite angle is
a. 138° b. 70° c. 60° d. 80°
71. The three angles of a triangle are in the ratio 2 : 3 : 4, then the measure of three angle are
a. $20^\circ, 60^\circ, 100^\circ$ b. $40^\circ, 60^\circ, 80^\circ$
c. $40^\circ, 50^\circ, 90^\circ$ d. $50^\circ, 60^\circ, 70^\circ$
72. Which one is possible to have a triangle from the following measures
a. 6cm, 3cm, 2cm b. 5.5cm, 2.5cm, 2.5cm

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c. 3cm, 6cm, 7cm

d. 2cm, 8cm, 3cm

73. An exterior angle of a triangle is
- Equal to adjacent angle
 - Greater than each one of its interior opposite angle
 - less than its adjacent angle
 - equal to the sum of the two interior opposite angles

74. The two interior opposite of an exterior angle of a triangle is 45° & 63° , then the measure of exterior angle is

a. 100°

b. 80°

c. 63°

d. 108°

75. The exterior angle PRS of triangle PQR is 100° . If $\angle P = 50^\circ$, $\angle PQR$ is

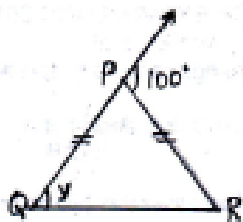
a. 30°

b. 150°

c. 80°

d. 130°

76. Find 'y', from the figure



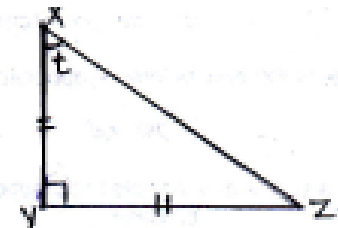
a. 50°

b. 25°

c. 75°

d. 100°

77. Find the measure of 't' from the figure



a. 90°

b. 60°

c. 40°

d. 45°

Answers: 61.b , 62.c , 63.c , 64.a , 65.d , 66.d , 67.b , 68.d , 69.a , 70.b , 71b , 72.c , 73.d , 74.d , 75.b , 76.a , 77.d

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V -Simple Equations

78. The number which when added to its half gives 30 . The number is _____ .
a. 10 b. 20 c. 40 d. 60
79. The sum of two consecutive multiples of 6 is 66 . Find the multiples ?
a. 32 , 34 b. 42 , 24 c. 30 , 36 d. none of these
80. After 12 years I shall be 3 times as old as I was 4 years ago . Find my present age ?
a. 12 b. 13 c. 14 d. 15
81. The value of the variable in the equation $\frac{x+1}{2} + \frac{x-2}{3} = 9$ is _____ .
a. 2 b. 12 c. 11 d. none of these
82. The value of x in the equation $\frac{4x}{3} = 7 - x$ is _____ .
a. 3 b. 4 c. 5 d. 6
83. A number increased by 20 and then reduced by 15 becomes 10 . Then the number is _____ .
a. 2 b. 5 c. 6 d. 7
84. Two -third of a number subtracted from 10 gives 10 . Then the number is _____ .
a. 30 b. 10 c. 0 d. none of these
85. The value of the variable in the equation $5(-7x+3) = x - 21$ is _____ .
a. 1 b. 2 c. -1 d. -2
86. Three-fourth of a number is 5 more than 7 . the number is _____ .
a. 16 b. 8 c. 12 d. 14
87. If I add three-eight to one eight of a number , I get zero . The number is _____ .
a. 0 b. 3 c. -3 d. none of these
88. If three-fifth of a number is four more than half of a number , then what is the number ?
a. 20 b. 30 c. 40 d. 50
89. If the difference of a number and 9 is 13 , then the number is _____ .
a. 22 b. 7 c. 16 d. 9
90. In a class of 40 students , the number of girls is $\frac{2}{3}$ of boy's . Then how many girls are there in the class ?
a. 16 b. 24 c. 26 d. none of these

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91. Find x if $x - \left(\frac{5x}{8} + \frac{x}{4}\right) = 15$?
- a. 100 b. 120 c. 150 d. none of these
92. The sum of three consecutive number be 78 . Find the number ?
- a. 75 b. 55 c.25 d.45
93. x is a number such that three times x is 36 . Which of these will be equal to 8 ?
- a. $\frac{x}{6}$ b. $\frac{x}{3}$ c. $\frac{2x}{3}$ d. $\frac{3x}{4}$
94. Raju reads $\frac{2}{3}$ of a book . He finds that there are still 100 pages to be read . The total number of pages in the book are .
- a. 100 b. 200 c. 300 d. none of these
95. Measures of three angles of a Δ le are $2x^\circ$, $(3x + 15)^\circ$ and $(8x - 30)^\circ$. then the measures of angles are ...
- a. 30 , 60 , 90 b. 45 , 45 , 90 c. 60 , 60 , 60 d. none of these
96. Dileep has 3 more marbles than Rohit . If both have 95 marbles then Dileep has _____ number of marbles .
- a. 45 b. 46 c. 47 d.45
97. The equation for the statement “ 6 less from thrice a number m is 18 “ is _____ .
- a. $3m - 6 = 18$ b. $6 - 3m = 18$ c. $6 \div 3m = 18$ d. none of these.

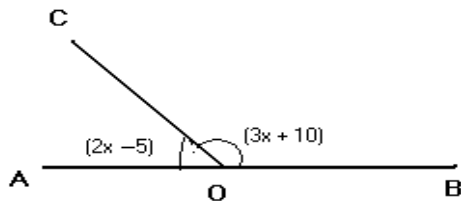
ANSWERS:-

78. b 79.c 80.a 81.a 82.a 83.b 84.c 85.a 86.a 87.c
88.c 89.a 90.a 91.b 92. c 93.c 94.c 95.a 96.b 97.a

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VI -Lines and angles

98. Measure of a reflex angle lies between:
a) 0° and 360° b) 90° and 180° c) 180° and 360° d) 0° and 180°
99. If one angle is $(90-x)^\circ$. Find the supplement.
a) 90 b) x c) $x-90$ d) $90+x$
100. Two angles can be supplement if both of them are:
a) obtuse angles b) right angles c) acute angles d) reflex angles
101. Which pair of angles are complementary:
a) $y^\circ, (180-y)^\circ$ b) $x^\circ, (90+x)^\circ$ c) $x, (90-x)^\circ$ d) $63^\circ, 37^\circ$
102. An angle of a linear pair is half of a right angle. Find the measures of the angles.
a) $90^\circ, 45^\circ$ b) $45^\circ, 135^\circ$ c) $90^\circ, 90^\circ$ d) $60^\circ, 120^\circ$
103. $\angle x$ and $\angle y$ form a linear pair. If $\angle y = (\angle x + 60^\circ)$ then $\angle x = \underline{\hspace{2cm}}$
a) 60° b) 120° c) 30° d) 90°
104. Number of angles formed by a transversal, when it intersects 3 parallel lines is:
a) 8 b) 12 c) 4 d) 6
105. In the given figure $\angle AOC = (2x - 5)^\circ$ and $\angle BOC = (3x + 10)^\circ$. Find the value of x.
a) 40° b) 30° c) 35° d) 19°

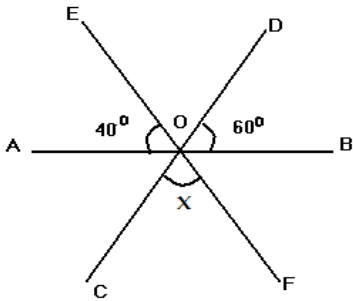


106. When two parallel lines are intersected by a transversal, then interior angles on the same side of the transversal are :
a) equal b) supplementary c) complementary d) none of these
107. Two angles which have one common vertex and their arms are opposite rays are called :
a) vertically opposite angles b) alternate interior angles
c) linear pair d) right angles
108. Measure of an angle lies between _____ and _____ :
a) 0° and 180° b) 0° and 360° c) 1° and 180° d) 90° and 360°

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109. In the figure $\angle AOE = 40^\circ$ and $\angle BOD = 60^\circ$. Find the angle x .

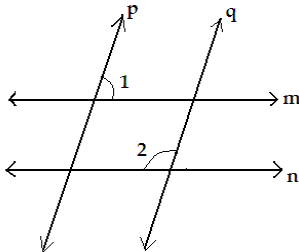
- a) 40° b) 60° c) 80° d) 100°



110. Two lines perpendicular to the same line are _____ to each other :

- a) Perpendicular b) parallel c) opposite d) none of these

111. In the figure $m \parallel n$ and $p \parallel q$. If $\angle 1 = 70^\circ$, $\angle 2 = \underline{\quad}$:

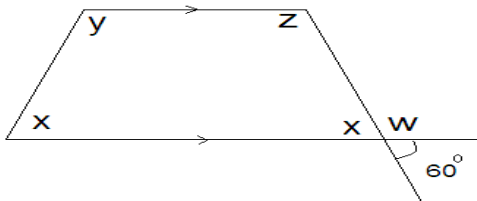


- a) 70° b) 100° c) 80° d) 110°

112. Measure of two complementary angles are in the ratio 2 : 3. Find the measure of the bigger angle.

- a) 64° b) 36° c) 70° d) 54°

113. In the figure given below, $\angle y = \underline{\quad}$:



- a) 100° b) 120° c) 60° d) 80°

114. Among two supplementary angles the bigger angle is 40° more than the smaller angle. Find the measure of the smaller angle.

- a) 60° b) 70° c) 80° d) 25°

Answer Key

98) c 99) d 100) b 101) c 102) b 103) a 104) b 105) c 106) b 107) c 108) b 109) c 110) b 111) d
112) d 113) b 114) b

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VII - Exponents & powers

115. The value of $(3^0 - 2^0) \times 5^0$ is

- (a) 5 (b) 1 (c) 0 (d) Not determinable

116. Express in standard form of 15260000

- (a) 1.526×10^7 (b) 1.52×10^5 (c) 15.260×10^6 (d) 152.6×10^7

117. $(\frac{-2}{5})^7 \div (\frac{-2}{5})^5$ is equal to .

- (a) $\frac{4}{25}$ (b) $\frac{-4}{25}$ (c) $\frac{25}{4}$ (d) None

118. Evaluate $(2^{55} \times 2^{60}) - (2^{97} \times 2^{18})$

- (a) 2^{115} (b) 0 (c) 1 (d) None

119. If $a = 2$ $b = 3$ then find the value of $a^b + b^a$

- (a) 71 (b) 2^5 (c) 5^2 (d) 17

120. Find the product of the cube of $(\frac{1}{2})$ and the square of $(\frac{-3}{5})$

- (a) $\frac{72}{25}$ (b) $\frac{200}{9}$ (c) $\frac{9}{200}$ (d) $\frac{-3}{10}$

121. Simplify $\frac{(-2)^4 \times 5^3 \times (-3)^5}{125 \times 3^5}$

- (a) -16 (b) 16 (c) 61 (d) -61

122. $3 \times 1000 + 2 \times 10 + \frac{4}{10} + \frac{8}{1000}$ is the expanded form of number -----

- (a) 3200.480 (b) 3002.408 (c) 32.480 (d) 3020.408

123. $(-1)^{10} + (-1)^{101} + (-1)^{51}$

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

124. If $\frac{p}{q} = (\frac{5}{6})^2 \div (\frac{5}{6})^0$, Find the value of $(\frac{p}{q})^2$

- (a) $\frac{635}{1296}$ (b) $\frac{625}{1296}$ (c) $\frac{605}{1296}$ (d) None

125. Which of the following is not equal to $(\frac{-2}{5})^4$?

- (a) $\frac{-2^4}{5^4}$ (b) $\frac{2^4}{(-5)^4}$ (c) $\frac{(-2)^4}{5^4}$ (d) $\frac{-2}{5} \times \frac{-2}{5} \times \frac{-2}{5} \times \frac{-2}{5}$

126. Express 512×729 in exponential form

- (a) $3^6 \times 2^8$ (b) $3^5 \times 2^9$ (c) $3^6 \times 2^{10}$ (d) $2^9 \times 3^6$

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127. Find the value of $\frac{x}{y}$ if $\left(\frac{3}{5}\right)^4 \times \left(\frac{15}{10}\right)^4 = \left(\frac{x}{y}\right)^4$

- (a) $\frac{9}{10}$ (b) $\frac{1}{10}$ (c) $\frac{15}{4}$ (d) $\frac{15}{10}$

128. In power notation $\frac{243}{32}$ can be expressed as

- (a) $\left(\frac{3}{4}\right)^2$ (b) $\left(\frac{3}{4}\right)^4$ (c) $\left(\frac{3}{2}\right)^4$ (d) $\left(\frac{3}{2}\right)^5$

129. Third power of $\left(\frac{1}{3}\right)$ X fourth power of 3 is equal to

- (a) $\frac{1}{8}$ (b) 3 (c) $\left(\frac{1}{3}\right)^6$ (d) 6^6

130. Find the value $\left(\frac{2}{3}\right)^6 \times 3^4 \times \frac{1}{3} \times \frac{1}{6}$

- (a) $\frac{81}{32}$ (b) $\frac{81}{23}$ (c) $\frac{32}{81}$ (d) None

131. Simplify and express the result as a rational number $(9^2 - 4^3) \times \left(\frac{-3}{17}\right)^2 \times \frac{34}{9}$

- (a) 2 (b) 8 (c) 17 (d) 71

132. Multiply $\frac{343}{729}$ and $\frac{9}{7}$ and express the result in exponential form

- (a) $\left(\frac{7}{9}\right)^3$ (b) $\left(\frac{7}{9}\right)^2$ (c) $\left(\frac{9}{7}\right)^3$ (d) $\left(\frac{9}{7}\right)^2$

133. Find the value $\left[\left\{\frac{1}{2}\right\}^2 - \left\{\frac{1}{3}\right\}^2\right] \times \left(\frac{3}{5}\right)^2 \times \left(\frac{-2}{3}\right)^3$

- (a) $\frac{-2}{135}$ (b) $\frac{1}{135}$ (c) $\frac{2}{135}$ (d) None

134. Find $\frac{4^3 xa^9 b^6 c^2}{4^2 xa^4 b^6 c}$

- (a) $4a^5c$ (b) $4^5a^3c^2$ (c) a^3c^2 (d) None

Answers 115)c 116) a 117)a 118)b 119)d 120)c 121)a 122)d 123) b 124)b 125) a
126) d 127) a 128) d 129) b 130)c 131)a 132)b 133)a 134) a

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VIII - Comparing Quantities

135) Ratio of 50 paise to 1 Rupee

- a)1:2 b)50:1 c)1:50 d)2:1

136) What rate gives Rs.100 as interest on a sum of Rs.1000 in 2 years

- a)10% b)1% c)5% d)none of these

137) 16 is 25% of

- a)64 b)400 c)4 d)100

138) Charge given on borrowed money is

- a)Principal b)Interest c)Amount d)Profit

139) Cost of an item is Rs.550. It is sold with a profit of 10%. The selling price is

- a)Rs.560 b)Rs.500 c)Rs.540 d)Rs.605

140) Interest=**I**, Principal=**P**, Rate of interest=**R**, Time=**T**. Which of the following is correct?

- a) $I = \frac{PTR}{100}$ b) $R = \frac{PT}{I} \times 100$ c) $P = \frac{TR}{I} \times 100$ d) $I = PTR \times 100$

141) A football team played 30 matches in one season and won 40% of them.

Number of matches they won is

- a)12 b)10 c)18 d)none of these

142) 25% of 1Kg is

- a)750g b)25Kg c)250g d)25g

143) Selling price of an item is

- a)Profit + Cost price b)Cost price + Loss c)Cost price — Profit d)Loss — Cost price

144) On a certain sum the interest paid after 15 months is Rs.150 at 5% rate of interest p.a. The sum is

- a)Rs.11250 b)Rs.112.50 c)Rs.2400 d)Rs.200

145) $0.03 = \underline{\hspace{2cm}}\%$

- a)0.003 b)30 c)300 d)3

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146) Price of oil increased from Rs.50 to Rs.70. The percentage of increase is

- a) 40% b) 28.6% c) 0.5% d) 0.7%

147) Out of 45 students 9 are absent. Percentage of the students present is

- a) 20% b) 36% c) 0.36% d) 80%

148) An item was sold for Rs.450 at a loss of 10%. Its cost price is

- a) Rs.405 b) Rs.500 c) Rs.460 d) Rs.4500

149) $4.5 : 2.5 = 9 : \underline{\quad}$

- a) 2 b) 7 c) 5 d) none of these

150) If one dozen bangles costs Rs.96, cost of 10 bangles is

- a) Rs.80 b) Rs.960 c) Rs.8 d) Rs.120

151) Ratio of 1.5km to 15m

- a) 1.5 : 15 b) 1 : 100 c) 15 : 1.5 d) 100 : 1

152) The amount to be paid at the end of 3 years for Rs.1100 at 11% rate of interest p.a

- a) Rs.1463 b) Rs.363 c) Rs.12100 d) Rs.1121

153) If angles of a triangle are in the ratio 1:3:5, The value of the greatest angle is

- a) 90° b) 100° c) 180° d) 80°

154) Acid and water are mixed in the ratio 2:9. Find the quantity of acid in 66 litres of dilute acid

- a) 12 litres b) 11 litres c) 54 litres d) 6 litres

Answers

135)a 136)c 137)a 138)b 139)d 140)a 141)a 142)c 143)a 144)c 145)d 146)a 147)d 148)b 149)c 150)a 151)d 152)a 153)b 154)a

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IX - Perimeter and Area

155. The breadth of a rectangle with length 12cm and perimeter 36cm is:

- a) 6cm b) 3cm c) 9cm d) 12cm

156. Find the area of a square park whose perimeter is 96cm

- a) 576cm^2 b) 626cm^2 . c) 726cm^2 d) 748cm^2

157. Find the length of a parallelogram whose area is 246cm^2 and base is 20cm^2

- a) 1.23cm b) 13.2cm c) 12.3cm d) 1.32cm

158. What happens to the area of a square if its side is doubled?

- a) The area becomes 4 times the area of Original Square
b) The area becomes $\frac{1}{4}$ times the area of Original Square
c) The area becomes 16 times the area of the original square
d) The area becomes $\frac{1}{16}$ times the area of the original square

159. The ratio of the radii of two circles is 3:2. What is their circumferences?

- a) 2:3 b) 1:3 c) 3:2 d) 3:1

160. Find the diameter of a circle whose area is 154cm^2

- a) 4 cm b) 41 cm c) 2 cm d) 14 cm

161. $50\text{ hectare} = \text{-----m}^2$

- a) 5000 b) 50,000 c) 5,00,000 d) 50,00,000

162. A square with area 64cm^2 , then perimeter of the square is

- a) 32 cm b) 48 cm c) 128 cm d) 64 cm

163. Find the cost of flooring a square shaped room of side 8m at the rate of Rs 50 per m^2

- a) Rs 6100 b) Rs 1600 c) Rs 1200 d) Rs 6200

164. A circle has area which is 100 times the area of another circle. What is the ratio of their circumferences

- a) 10: 1 b) 1:10 c) 1:1 d) 2:1

165. The area of a parallelogram is 338m^2 and its height is twice the corresponding base, determine the base.

- a) 31 cm b) 13 cm c) 14 cm d) 41 cm

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166. The height of a triangle whose base is 13cm and area is 65 cm^2 is

- a) 12 cm b) 15 cm c) 10 cm d) 20 cm

167. Find the area of an isosceles right triangle of equal sides 40 cm each.

- a) 400 cm^2 b) 200 cm^2
c) 600 cm^2 d) 800 cm^2

168. An ox tied to a pole with 10m long rope. The ox moves keeping the rope tight. Find the area of the ground swept by the rope.

- a) 31.4 m^2 b) 614 m^2
c) 314 m^2 d) 416 m^2

169. The ratio of area of a circle to the area of semi circle is

- a) 1: 2 b) 2: 1 c) 4:1 d) 1: 4

170. A circle is inscribed in a square of side 28cm. Find the area of the circle.

- a) 661 cm^2 b) 616 cm^2
c) 166 cm^2 d) 660 cm^2

171. A piece of wire in the form of a rectangle with dimensions 12m by 10m is bent to form a circle. Find the diameter of a circle.

- a) 41m b) 17 m c) 14 m d) 7 m

172. Determine the radius of a circle whose circumference is 110 cm

- a) 15.5cm b) 71.5cm c) 51.5cm d) 17.5cm

173. Find the circumference of a circle with diameter 10 cm

- a) $31 \frac{3}{7} \text{ cm}$ b) $7 \frac{31}{3} \text{ cm}$ c) $3 \frac{7}{31} \text{ cm}$ d) $4 \frac{31}{7} \text{ cm}$

174. The radius of a circle is doubled. What is the ratio of the new circle to the area of the given circle.

- a) 1:4 b) 2:1 c) 1:2 d) 4:1

Answers

155(a) 156(a) 157(c) 158(a) 159(c) 160(d) 161(c) 162(a) 163(b) 164(a) 165(b) 166
(c) 167(d) 168(c) 169(b) 170(b) 171(c) 172(d) 173(a) 174(d)

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X - ALGEBRAIC EXPRESSION

175) How many terms are there in the expression $1.2ab - 2.4b + 3.6a$?

- (a) 1 (b) 2
(c) 3 (d) 4.

176) What is the coefficient of x in the expression $y^2x + y$?

- (a) y^2 (b) y
(c) 1 (d) 0.

177) Which of the following pairs of terms is a pair of unlike terms?

- (a) $3x, 2xy$ (b) $-xy^2, -2xy^2$
(c) $-6x^2, 20x^2y$ (d) $8x^2, 7y$.

178) Which of the following pairs of terms is a pair of unlike terms?

- (a) $-p^2q^2, 12q^2p^2$ (b) 41, 100
(c) $qp^2, 13p^2q$ (d) $-4yx^2, -4xy^2$.

179) What is the sum of $a + b - 1$, $b - a + 1$ and $1 - 2b$?

- (a) 1 (b) -1
(c) 2 (d) -2.

180) Simplify: $p + (p - q) + q + (q - p)$.

- (a) p (b) q
(c) $p + q$ (d) $p - q$.

181) What should be added to $x^2 + 3xy + y^2$ to get $x^2 + y^2$?

- (a) $2xy$ (b) $-2xy$
(c) $3xy$ (d) $-3xy$.

182) What should be subtracted from 1 to get $1 - x + 2x^2$?

- (a) $2x^2 - 1$ (b) $x - 2x^2$
(c) $1 - x$ (d) $1 + x$.

183) A term of an expression having no literal factor is called a _____ .

- (a) monomial (b) constant
(c) trinomial (d) variable.

184) What is the degree of the polynomial $9xy - 12x^2y + 5 - 2x^2y^3$?

- (a) 1 (b) 2
(c) 5 (d) 3.

185) What should be added to $x - y$ to get $2x$?

- (a) y (b) x
(c) $x + y$ (d) $x - y$.

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- 186) Find the value of the expression $5n - 3$ for $n = -1$.
- (a) 5 (b) -3
(c) 8 (d) -8.
- 187) What is the value of the expression $a^2 + ab + 1$ for $a=0, b=1$.
- (a) 0 (b) 1
(c) -1 (d) 2.
- 188) What should be taken away from $3xy - 2x^2 - 2y^2$ to obtain $5x^2 - 7xy + 5y^2$?
- (a) $10xy - 7x^2 - 7y^2$ (b) $-4xy - 7x^2 - 7y^2$
(c) $7x^2 - 10xy + 7y^2$ (d) $10xy + 7x^2 + 7y^2$.
- 189) Subtract $-6x^2$ from x^2 .
- (a) $-7x^2$ (b) $7x^2$
(c) $6x^2$ (d) $5x^2$.
- 190) The sum of $t - 5tz$, $2tz - z$ and $z - t$ is _____.
- (a) $2t - 3tz$ (b) $2z - 3tz$
(c) $3tz$ (d) $-3tz$.
- 191) If $A = 2x - y + 3xy$, $B = x + 2xy$ and $C = 3y + xy$, find the value of $A+B+C$.
- (a) $-3xy + 2y + 6xy$ (b) $3x + 2y + 6xy$
(c) $3xy - 2y - 6xy$ (d) $5xy - 2y$.
- 192) Find the value of the expression $a^3 + b^3 + c^3 - 3abc$ for $a = 2, b = 3, c = 4$.
- (a) 3 (b) 6
(c) 9 (d) 27.
- 193) If the value of the expression $x^2 - 5x + k$ for $x = 0$ is 5, then the value of k is _____.
- (a) 2 (b) 3
(c) 4 (d) 5.
- 194) In $(-x)$ the coefficient of x is _____.
- (a) 1 (b) -1
(c) x (d) $-x$.

ANSWERS

175. C
176. A
177. B
178. D
179. A
180. C
181. D
182. B

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183. B
184. C
185. C
186. D
187. B
188. A
189. B
190. D
191. B
192. D
193. D
194. B