

MATHEMATICS

- The mathematical term algebra means
 - The restoration of broken parts
 - Numbers
 - Reduction and comparison
 - Logical sequence
- The book of integration and equations was written by
 - Alkhwazimi
 - Diophanturs
 - Alexander
 - Aryabhata
- The father of algebra
 - Alexander
 - Ramanujam
 - Diophantus
 - Bhaskara
- An algebraic expression that contains only two terms is called
 - Monomial
 - Binomial
 - Trinomial
 - Polynomial
- The degree of polynomial $13x^4 - 2x^2y^3 - 4$ is
 - 4
 - 5
 - 0
 - 2
- The product of $(x+3)(x^2-5x+7)$ is
 - $x^3 - 4x^2 + 6x - 21$
 - $x^3 - 2x^2 - 8x + 21$
 - $x^3 + 2x^2 + 8x - 21$
 - $x^3 - 2x^2 + 18x + 21$
- The value of $997^2 - 3^2$ is
 - 249600
 - 994000
 - 9884000
 - 994300
- The value of $\frac{1}{4} [(a+b)^2 - (a-b)^2]$ is
 - $a^3 + b^3$
 - ab
 - $a^2 + b^2$
 - $a^3 - b^3$
- $x^6 - 3x^4 + 2x^2$ % $3x^2$ is
 - $\frac{1}{3} x^4 + x^2 - \frac{2}{3}$
 - $\frac{1}{3} x^4 - x^2 + \frac{2}{3}$
 - $\frac{1}{3} x^4 + 2x^2 - \frac{4}{3}$
 - $\frac{1}{3} x^4 - 2x^2 + \frac{4}{3}$
- A rational number is such that when we multiply it by $\frac{5}{2}$ and add $\frac{2}{3}$ to the product we get $-\frac{7}{2}$. What is the number
 - $\frac{1}{2}$
 - $\frac{3}{2}$
 - $-\frac{1}{2}$
 - $-3\frac{1}{2}$
- A parallelogram in which each angle is a right angle is called
 - Rectangle
 - rhombus
 - trapezium
 - square
- To construct a rhombus we need
 - 3 independent measures
 - two independent measures
 - Only one measure
 - all the four sides

13. A quadrilateral with each pair of opposite sides parallel and with each pair of adjacent sides equal is called
- a) Trapezium b) rhombus c) parallelogram d) kite
14. The x – coordinate is called as
- a) Ordinate b) origin c) abscissa d) ordinal
15. The y – coordinate is called as
- a) Ordinate b) origin c) abscissa d) ordinal
16. What percent in 15 paise of 2 rupees and 70 paise
- a) $1\frac{1}{4}\%$ b) $5\frac{5}{9}\%$ c) $5\frac{3}{7}\%$ d) $1\frac{3}{4}\%$
17. When there is a loss selling price is
- a) $\left(\frac{100+profit\%}{100}\right) \times cp$ b) $\left(\frac{100+loss\%}{100}\right) \times cp$ c) $\left(\frac{100}{100+loss\%}\right) \times sp$ d) $\left(\frac{100}{100+profit\%}\right) \times sp$
18. The tax added to the value of product is called
- a) Sales tax b) VAT c) Exise tax d) service tax
19. The discount is always on the
- a) Marked price b) cost price c) Selling price d) interest
20. Difference between compound and simple interest for two years is
- a) $P(1+r/100)^2$ b) $p(r/100)^2$ c) $(1-r/100)^2$ d) $p(r+1/100)^2$
21. E.M.I is
- a) Principal – interest/number of months b) number of months/principal-interest
c) principal + interest/number of months d) number of months/principal+interest
22. A can do a piece o walk in 20 days and B can do I in 30 days. How long thy take to do the work together?
- a) 12 days b) 30 days c) 10 days d) 1/10 day
23. Geometry has developed by
- a) Egyptian b) Arabian c) Greeks d) Italians
24. Point of concurrency of perpendicular bisectors of three sides
- a) circumcentre b) incentre c) centroid d) orthocenter
25. The value which occurs most frequently in a distribution is
- a) Mean b) median c) mode d) range

26. Which is the branch of mathematics that involves alphabet, numbers and mathematical operations
- a) sequence b) analysis c) statistics d) Algebra
27. Profit percentage =
- a) $(\text{Profit}/\text{c.p}) \times 100$ b) $(\text{loss}/\text{c.p}) \times 100$ c) $(\text{c.p}/\text{Profit}) \times 100$ d) $(\text{c.p}/\text{loss}) \times 100$
28. Area of trapezium =
- a) $\frac{1}{2} h (a+b)$ b) $\frac{1}{2} ah$ c) $\frac{1}{2} bh^2$ d) $\frac{1}{2} abh$
29. The sum of the three angles of a triangle is
- a) 360° b) 180° c) 45° d) 90°
30. A quantity which has a fixed numerical value is a
- a) Variable b) Number c) Constant d) term
31. Expressions are made up of
- a) Terms b) numbers c) Power d) coefficient
32. In 2010, the population of a town is 150000. If it is increased by 10% in the next year, find the population in 2011
- a) 174000 b) 164000 c) 155000 d) 165000
33. The length of the two parallel sides of a trapezium are 15cm and 10cm. If its area is 100sq.cm. Find the distance between the parallel sides
- a) 8cm b) 7cm c) 4cm d) 3cm
34. The cost of fencing a circular park at the rate of Rs. 5 per metre is Rs. 1100. What is the radius of the park
- a) 5m b) 35m c) 34m d) 37m
35. What is the variable which occurs most frequently in the given data
- a) Median b) Mean c) Mode d) standard deviation
36. Which number has no reciprocal
- a) 0 b) 1 c) -1 d) $\frac{1}{4}$
37. The additive identity of rational number is
- a) 0 b) 1 c) -1 d) $\frac{1}{4}$
38. The multiplicative inverse of 2^{-4} is
- a) 2 b) 4 c) 2^4 d) -4

39. -21^{-2} is equal to
 a) $-1/2$ b) $1/4$ c) $-1/2$ d) $-1/4$
40. Ramanujam number is
 a) 1029 b) 1729 c) 1829 d) 1079
41. The number of zeros of the cube root of 1000 is
 a) 1 b) 2 c) 3 d) 4
42. Which of the following is false
 a) Cube of any odd number is odd
 b) A perfect cube doesnot end with 2 zeros
 c) The cube of a single digit number may be a single digit number
 d) There is no perfect cube which ends with 8
43. Complete the following 1,1,2,3,5,8,13,21
 a) 80 b) 34 c)89 d) 55
44. Area of a semicircle is ----- terms the area of the circle
 a) Two b) four c) One –half d) cine quarter
45. The central angle of a quadrant is
 a) 90° b) 270° c) 180° d) 0°
46. A polygon in which atleast one angle is more than 180 is called
 a) Concave polygon b) concave polygon c) irregular polygon d) regular polygon
47. Which of the following statement is correct
 a) Equilateral triangle is equilateral b) Isosceles triangle is equilateral
 b) Equiangular triangle is not equilateral c) Scalene triangle is equiangular
48. Two plane figures are said to be congruent if they have
 a) Same size b) the same shape c) the same size, same, shape
 d) The same size but not same shape
49. In triangle ABC and triangle DEF, $B = E$, $AB = DE$, $BC = EF$, The two triangle are congruent under ----- axiom.
 a) SSS b) AAA c) SAS d) ASA
50. The golden ratio was developed by
 a) Greeks b) Egyptians c) Italian d) Aryans

ANSWERS

1.a 2.a 3.c 4.b 5.b 6.b 7.b 8.b 9.b 10.c

11.d 12.b 13.b 14.c 15.a 16.b 17.b 18.b 19.a 20.b

21.c 22.d 23.a 24.a 25.c 26.d 27.a 28.a 29.b 30.c

31.a 32.d 33.a 34.b 35.c 36.a 37.a 38.c 39.b 40.b

41.a 42.d 43.b 44.a 45.a 46.b 47.a 48.c 49.c 50.a