Mathematics – Class 6

Algebra

1.The value of the expression $\frac{n^2}{2}+\frac{n}{2}$ when n = 12 is@76@74@78@72@0010

2.If $\frac{7x}{3}-\frac{7}{6}$ is a polynomial, then the zero of the polynomial is@1/2@-1/2@0@– 2@1000

3.If the zero of the polynomial in 'x' is -5/4 , then the polynomial is@ 4x – 5@ 5x – 4@5x + 4@4x +5@0010

4.If A = – 8x²– 6x + 10, then its value when 'x' =1/2 is@6@4@5@7@0010

5.The third degree polynomial among the following is @ 2x^{3 – 1} + 3x^{2 – 1}+ 5@ 3x^{4– 1}+ 2x^{3 – 1}+ 6x^{2 – 1} + 8 @3x^{– 2 – 1} + 4x^{– 2} + 5@2x^{5 – 3} + 3x^{4 – 3} + 7@0100

6.Among the following the expression which is not a monomial is@ $\frac{4a^3b^2c^5}{23}$ @– 147 x³y²@ $\frac{2}{7}x^{-2}y^5z$ @x3y5z12@0010

7.If , $x=\frac{a}{2}$ then the value of 4x² + 8x + 18 is@ a² + 2a + 8@ a² + 3a + 18@a² + 4a + 18@a² + 5a + 18@0010

8.The value of the expression $\frac{-26}{3}-\frac{13x}{27}$ when x = $\frac{9}{13}$ is@ – 8@ – 10@– 9@– 11@0100

9.Degree of the polynomial p + q x^m + rx^{m + 2} + 5x^{m + 3} + x^{m + 4} is @ m@ m + 2@m + 3@m+ 4@0010

10.If $\frac{n(n+1)(2n+1)}{6}$ represents sum of the squares of first 'n' natural numbers, then its value when n = 10 is@ 365@ 375@395@385@0001

11.Degree of the polynomial $\frac{1}{2}x^5+3x^4+2x^3+3x^2+6$ is@4@3@5@2@0010

12.Degree of the monomial $\frac{3}{5}x^2y^6z^7$ is@15@9@8@13@1000

13.In a polynomial 3x + 5 where x = a + 2, then its value when a = 8 is@ 25@ 45@35@40@0010

14.The sum of $\frac{3}{4}x^3,\frac{5}{6}x^3,-\frac{2}{3}x^3$ and $\frac{7}{2}x^3$ is @ $\frac{12}{53}x^3$ @ $-\frac{53}{12}x^3$ @ $\frac{53}{12}x^3$ @ $-\frac{12}{53}x^3$ @0010

15.The simplified form of 3x³ – 2x² – 8x – 6x² + 7x³ + 9x + 8x³ – 9x² + 6x is @ – 18x³ – 17x² + 7x@ 18x³ – 17x² – 7x@18x³ + 17x² – 7x@18x³– 17x²+ 7x@0100

16.The ascending order of the polynomials – 3x³ + 7x² – 9x⁴ + 6x – 8 is@ – 8 + 6x + 7x² – 3x³ + 9x⁴@ – 8 – 6x – 7x² – 3x³ – 9x⁴@– 8 + 6x + 7x² –

$3x^3 - 9x^4$@8 + 6x + $7x^2 + 3x^3$ + $9x^4$@1000

17.If A = – 7x – 3x – 5x and B = 9x + 3x + 2x, then A + B is@ 2x @ – 2x@– x@– 3x@0010

18.If , $\frac{1}{2}x - \frac{1}{3}x = A$ and $\frac{1}{3}x - \frac{1}{4}x = B$ then A – B is @ 1/12x@-1/12x@– 2x@0@1000

19.The equivalent expression of $2x^3 - 3x^2 - 8x - 3$ is@$3x^3 - 5x^3 + 7x^2 - 5x^2 - 8x + 10x - 4 + 1$@$3x^3 - x^3 - 5x^2 + 2x^2 - 9x + x - 7 + 4$@$4x^3 - 6x^2 - 3x^3 + 3x^2 + x^2 - 9x + 3x + 6 - 3$@$4x^3 - 2x^3 + 3x^2 - 5x^2 - 8x + 6x + 4 - 1$@1000

20.The descending order of $4x^2 - 9x^3 + 3x^2 - 9x^4 + 3x^3 - 9x^2 + 6x - 3x + 5 - 3$ is @$- 9x^4 + 6x^3 - 2x^2 + 3x + 2$@ $- 9x^4 - 6x^3 + 2x^2 - 3x + 2$@$- 9x^4 - 6x^3 - 2x^2 + 3x + 2$@$-9x^4 + 6x^3 - 2x^2 + 3x - 2$ @0010

21.If $-\frac{7}{5}x^3 + \frac{3}{4}x^3 + \frac{7}{2}x^3 + \frac{9}{3}x^3$ is added to , then the $\frac{9x^3}{60}$ result is@ $- 6x^3$@ $6x^3$@$60x^3$@$16x^3$@0100

22.If 2x – 3x + 5x = P, Q = – 8x + 3x + 9x and R = – 8x – 6x – 7x, then (P + Q) – R is @ 27x@ 28x@29x@26x@0010

23.If A = $- 3x^3 - 2x^3 + 4x^2 - 2x^2$,B = $- 3x^2 + 5x^2 - 8x + 3x$ and C = 2x – 9x – 7 + 8,then A + B + C in simplified form is@$- 5x^3 + 4x^2 - 12x + 1$@ $5x^3 - 3x^2 - 12x + 1$@$- 5x^3 - 4x^2 - 12x - 1$@$5x^3 + 3x^2 + 12x + 1$@1000

24.If $4x^3y^2 + 3x^2y^3 - x^2y^5$ is added $- 9x^2y^3 + 6x^2y^5 - 9x^3y^4$, then the result is@ $4x^3y^2 + 5x^2y^3 - 2x^2y^5 - 9x^3y^4$@ $4x^3y^2 - 6x^2y^3 - 2x^2y^5 - 9x^3y^4$@$4x^3y^2 - 6x^2y^3 + 2x^2y^5 - 9x^3y^4$@$- 4x^2y^2 - 6x^2y^3 - 2y^2y^5 - 9x^3y^4$@0100

25.If $0.5x^3 + 1.85x^3 + 2.96x^3 - 4.71x^3$ is added to $(1.25\ x^4 - 2.5x^5 + 3.6x^4 - 4.71x^D)$, then the result is@ $0.6x^3 + 2.36x^4$@ $- 0.6x^3 - 2.36x^4$@$0.6x^3 - 2.36x^4$@$- 0.6x^3 + 2.36x^4$@0010

26.If B = – 9x² + 3x – 7, then the additive inverse of B is@ 9x² – 3x – 7@9x² – 3x + 7@ – 9x² – 3x – 7@– 9x² + 3x + 7@0100

27.If A = $\frac{-3x^2}{4}+\frac{2}{3}x+7$ and B = $\frac{1}{4}x^2-\frac{1}{3}x+8$, then A – B is@ x² – x + 1@– x² – x – 1@– x² + x – 1@x² + x + 1@0010

28.If P = 2x³ – 3x² – 5x + 6 and Q = $\frac{1}{3}x^3-\frac{3}{4}x^2-\frac{5}{2}x+\frac{7}{3}$, then Q – P is@ $\frac{5x^3}{3}+\frac{9x^2}{4}+\frac{5x}{2}-\frac{11}{3}$@ $\frac{-5x^3}{3}-\frac{9x^2}{4}+\frac{5x}{2}-\frac{11}{3}$@ $\frac{-5x^3}{3}-\frac{9x^2}{4}-\frac{5x}{2}-\frac{11}{3}$@ $\frac{5x^3}{3}+\frac{9x^2}{4}+\frac{5x}{2}-\frac{11}{3}$@0100

29.If $A=-\frac{3}{2}x^3-\frac{9}{7}x^2+\frac{6x}{7}+2$ and A + B = 0, then polynomial B is@ $\frac{-3x^3}{2}-\frac{9}{2}x^2+\frac{6x}{7}+2$@ $\frac{3x^3}{2}+\frac{9}{2}x^2+\frac{6x}{7}+2$@ $\frac{-3x^3}{2}-\frac{9}{2}x^2-6x-2$@ $\frac{3x^3}{2}+\frac{9}{7}x^2-\frac{6x}{7}-2$@0001

30.If A = 2x³ – 9x² – 6x + 7 and A + B = 5x³ – 6x² – 8x + 9, then the polynomial l) (A + B) – A is@ $3x^3 – 3x^2 – 2x + 2$@3x³ + 3x² – 2x + 2@3x³ + 3x² + 2x + 2@– 3x³ – 3x² – 2x + 2@0100

31.If A = 4x³ – 9x² – 9x – 8 and A – B = – 2x³ – 8x² – 6x – 2, then the polynomial B = A – (A – @ is@ 6x³ – x² – 3x – 6@ 6x³ + x² + 3x + 6@6x³ + x² + 3x – 6@– 6x³ – x² – 3x – 6@1000

32.Given A = 2x³ – 3x² + 6x + 7 and B = 4x³ – 9x² – 3x + 7, If C, D are additive inverses of A and B, then D – C is@ – 2x³ + 6x² + 9x@ – 2x³ + 5x² + 9x@– 2x³ – 6x² + 9x@– 2x³ – 6x² – 9x@1000

33.If A – B = 2x³ – 3x² + 8x – 7 and B = 5x³ – 9x² + 6x – 8, where A = (A – @ + B, then the polynomial A is@ 7x³ – 12x² + 14x + 18@ 7x³ – 12x² + 14x – 15@7x³ – 12x² – 14x + 15@– 7x³ + 12x² – 14x – 5@0100

34.Given and C + A = 0. If is added to A, then the result is@ x² – x + 1@ – x² – x – 1@x² + x – 1@x² – x + 1@0010

35.If A = 7x³ – 2x² – 9x + 6, B = 2x³ – 8x² + 3x – 5, C = 2x³ – 4x² – 8x + 7, and D = – 3x³ – 5x² + 6x + 7, then (A – – (B – @is@ 5x² – 2x – 11@ 5x² + 2x + 11@5x²– 2x + 11@5x² – 2x – 11@0100

36. . Which out of the following are expressions with numbers only?@(7 × 20) – (5 × 10) – 45@ 3x@(7 × 20) – 8z@5 – 5n@1000

37. . Perimeter of the square, whose each side is ‘n’ cm is@ 4n@ 2n @3n@None of these @1000

38. Give expression for 25 added to r.@25 + r@25 – r@25r@None of these@1000

39. Number of matchsticks required to make a pattern of “U”@ 4@5@3@6@0010

40. The _____ of the variable in an equation which satisfies the equation is called a solution to the equation.@value@term@factor@None of these@1000

41. . Choose a value of 'a' that satisfies the equation 6a = -30.@5@30@-5@10@0010

42. Perimeter of an _____ = 3 × length of a side @ equilateral triangle@ isosceles triangle@right-angled triangle@None of these@1000

43. Which of the following is an equation?@2x + 3 = 5@2x + 3 < 5@2x + 3 > 5@2x + 3 ≤ 5@1000

44. The expression for the statement: “y multiplied by 10 and then 7 added to product” is@7y – 10@ 10y – 7@10y + 7@None of these@0010

45. An _____ is a condition on a variable.@ expression@ equation @equal@none of these@0100

46. Take Meena’s present age to be y years, what will be her age 5 years from now?@y+5 @5/y@y-5 @5y@1000

47. Which of the following is the perimeter of a regular hexagon of side's' units?@6 s units@12 s units@6 s2 sq units @-6 s units@1000

48. . Ramu's father is thrice as old as Ramu. If father's age is 45 years, how old is Ramu?@45 years@ 30 years@15 years@10 years@0010

49. . Which of the following does 2n -1 represent?@1 subtracted from the product of n and 2.@The difference of two times n and 2.@2n added to 1.@n subtracted from 2.@1000

50. Perimeter of an equilateral triangle, whose each side is ‘x’ unit is @ 4x@ 2x @3+x @3x@0001

51. Pick out the solution from the values given in the bracket next to each equation. p – 5 = 5 (0, 10, 5 – 5)@0@5@-5@10@0001

52. The side of an equilateral triangle is shown by l.Express the perimeter of the equilateral triangle using l.@3l@2l@l@None of these@1000

53 Pick out the solution from the values given in the bracket next to each equation. x + 4 = 2(– 2, 0, 2, 4)@-2@4@2@1000

54. A number is multiplied by 6 and 12 is added to the product. The result is 84. What is the number?@ -12@72@12@-72@0010

55. Find the length of a side of an equilateral triangular garden whose perimeter is 66 m. @ 66 m@ 11 m@3m@22 m@0001

56. What is the method of finding a solution by trying out various values for the variable called?@ Error method @ Trial and error method @Testing method@Checking method@0100

57. Number of matchsticks required to make a pattern of “A”@4@3@6@5@0100

58. A basket has x mangoes, how many mangoes are there in 5 baskets?@5@5x@6x @x@0100

59. What do literals usually represent?@ Known quantities@Variables@Constants@Depends on the problem@0100

60. The rule, which gives the number of matchsticks required to make the matchstick pattern L, is@2 n @3 n @4n@5 n.@1000

61. The rule, which gives the number of matchsticks required to make the matchstick pattern C, i@2 n @3 n@4 n@5 n.@0100

62. The rule, which gives the number of matchsticks required to make the matchstick pattern F, is@2 n@ 3 n@4 n@5 n.@0010

63. The rule, which gives the number of matchsticks required to make the matchstick pattern U, is@2 n@3 n@4 n@5 n.@0100

64. The rule, which gives the number of matchsticks required to make the matchstick pattern V, is@2 n @3 n @4 n@5 n.@1000

65. The rule, which gives the number of matchsticks required to make the matchstick pattern A, is@2 n @ 3 n@4 n@5 n.@0100

66. The rule, which gives the number of matchsticks required to make the matchstick pattern [ ], is@ 2 n @ 3 n@4 n @5 n@0010

67. The rule, which gives the number of matchsticks required to make the matchstick pattern ≅, is@2 n@3 n@4 n@5 n.@1000

68. The rule, which gives the number of matchsticks required to make the matchstick pattern E. is@2 n @3 n@4 n @5n.@0001

69. The rule, which gives the number of matchsticks required to make the matchstick pattern A, is@ 3 n @ An @5 n @6 n.@0010

70. The rule, which gives the number of matchsticks required to make the matchstick pattern A, is@3 n @ 4 n @5 n @6 n.@1000

71. The rule, which gives the number of matchsticks required to make the matchstick pattern S, is @3 l @4 n@5 n@6 n.@0010

72. The side of a square is l. Its perimeter is@3l@2l@4l@6l@0010

73. The side of an equilateral triangle is l. Its perimeter is@l@2l @3l@6l.@0010

74. The side of a regular pentagon is l. Its perimeter is@3l@6l@4l@5l@0001

75. The side of a regular hexagon is l. Its perimeter is@l@2l@3l@6l.@0001

76. The length of an edge of a cube is l. The total length of its edges is@3l@4l@6l @12l.@0001

77. The radius of a circle is r. Its diameter is@2r@4r@3r@6r.@1000

78. Which of the following is an expression with numbers only?@ x + 1@2x@1 – x@3.@0001

79. Which of the following is an expression with numbers only?@ 2(4 – 3) + 5 × 6 @ 2 × 3 – 4x @4 × 5 – 10 × 2 – 25 + x @x8@1000

80. Which of the following is not an expression with numbers only?@ 2 × (3 + 4) @(2 + 3) × 4@2 × 3 +4 × 5 @2x + 1.@0001

81. The expression for ‘1 added top’ is @P + 1@p – 1@1 – p@– 1 – P@1000

82. The expression for ‘1 subtracted from p’ is @p – 1@p + 1@1 – p@– 1 – p.@1000

83. The expression for ‘p multiplied by 2’ is @p + 2@P – 2 @P/2 @2p@0001

84. The expression for ‘p divided by 2’ is @P/2@2p@P + 2@p – 2.@1000

85. The expression for ‘1 subtracted from -p’ is @-P-1@p – 1@1 – p@1 + p.@1000

86. The expression for ‘1 added to -p’ is@ – p + 1@ – p – 1@p + 1@p – 1.@1000

87. The expression for ‘p multiplied by – 2’ is@ -2p@ – P/2@p – 2@– p – 2.@1000

88. The expression for ‘ -p multiplied by 2’ is @ -2p@ – P/2 @p – 2@– p – 2.@1000

89. The expression for’ -p divided by 2’ is@ – P/2@ -2p@-p + 2@– p – 2.@1000

90. The expression for ‘1 added to 2p’ is@ 2p + 1@2p – 1@1 – 2p@– 1 – 2p.@1000

91. The expression for ‘1 subtracted from 2p’ is @2p – 1 @ 2p + 1@1 – 2p @-2p -1.@1000

92. The expression for added’ is ‘ 2 times x to which 1 is @2x + 1@ x + 2@1 – 2x @2x – 1.@1000

93. The expression for ‘2 times x from which 1 is subtracted’ is @2x – 1 2x + 1@x – 2@x + 2.@1000

94. The expression for ‘x is divided by 2 and the result is added to 1’ is @1 + $\frac{x}{2}$ @1 – $\frac{x}{2}$ @2 + x@2 – x.@1000

95. The expression for ‘x is divided by – 2 and the result is added to 1’ is @1 – x/2@1 + x/2@x2 – 1@– 1 – x/2@1000

96. If Apala’s present age is x years, what will be her age in years after 20 years from now?@x + 20@ x – 20@x/20@20x.@1000

97. If Meenu’s present age is x years, what was her age in years, 10 years back? @x – 10 @10 – x@– x – 10 @10x.@1000

98. If the age of Hari Kishan is two times the age of Manish (which is x years), then the age of Hari Kishan, in years, is@x/2@2x@x + 2 @x – 2.@0100

99. The salary of Hari Kishan is two times the salary of Manish (which in Rs. x), then the salary of Hari Kishan, in rupees, is@ 2x@x/2@x + 2@x – 2.@1000

100. Which of the following is an equation in a variable?@10/2 = 5 @ 2 × 3 + 2 × 1 = 8 @2 × 4 = 8 @3p = 12.@0001