



MEGA MATH SYLLABUS

GRADE 7 & 8

1. The perimeter of a rectangle is 36 cm. If the length is 10 cm, what is the width?
A) 7 cm B) 8 cm C) 9 cm D) 10 cm
2. A shopkeeper sold a shirt for Rs. 600 at a profit of Rs. 100. What was the cost price?
A) 450 B) 500 C) 550 D) 520
3. The LCM of 12 and 18 is:
A) 24 B) 30 C) 36 D) 42
4. A triangle has angles 40° , 60° , and x° . Find x .
A) 70° B) 75° C) 80° D) 85°
5. The mean of 8, 10, 12, 14 is:
A) 10 B) 11 C) 11.5 D) 12
6. A die is rolled. Probability of getting a number greater than 4 is:
A) $1/6$ B) $1/2$ C) $1/3$ D) $5/6$
7. The perimeter of a square is 28 cm. Its area is:
A) 36 cm^2 B) 49 cm^2 C) 64 cm^2 D) 81 cm^2
8. If $x - 7 = 12$, then $x = ?$
A) 16 B) 19 C) 20 D) 21
9. Which of these is a multiple of both 4 and 6?
A) 16 B) 18 C) 20 D) 24
10. A car travels 120 km in 2 hours. What is its speed?
A) 50 km/h B) 60 km/h C) 65 km/h D) 70 km/h
11. If radius = 7 cm, circumference = ? ($\pi = 22/7$)
A) 40 B) 42 C) 44 D) 46
12. Simplify: $4x - 2 + 3x + 5$
A) $6x + 6$ B) $7x + 3$ C) $8x + 2$ D) $7x - 2$
13. Which is a prime number?
A) 27 B) 29 C) 33 D) 35
14. Area of triangle with base 12 and height 5 is:
A) 25 B) 30 C) 35 D) 40
15. If $2x = 18$, then $x = ?$
A) 7 B) 8 C) 9 D) 10
16. Median of 5, 7, 9, 11, 13 = ?
A) 7 B) 9 C) 11 D) 10

17. Which fraction is equal to 0.75?

- A) $\frac{2}{5}$ B) $\frac{3}{4}$ C) $\frac{4}{5}$ D) $\frac{7}{10}$

18. A man spends Rs. 240 which is 40% of his salary. His salary is:

- A) 500 B) 600 C) 650 D) 700

19. If $a = 5$ and $b = 3$, the value of $a^2 - b^2$ is:

- A) 14 B) 16 C) 24 D) 28

20. Probability of picking a king from a full deck (52 cards) = ?

- A) $\frac{1}{26}$ B) $\frac{1}{13}$ C) $\frac{1}{12}$ D) $\frac{1}{10}$

21. Area of circle with radius 3 cm is ($\pi = 3.14$):

- A) 26.5 B) 28.26 C) 30 D) 31

22. Solve: $x / 4 = 9$

- A) 32 B) 34 C) 36 D) 38

23. Volume of a cube with side 6 cm = ?

- A) 196 B) 216 C) 230 D) 240

24. Which is an equilateral triangle?

- A) $40^\circ, 50^\circ, 90^\circ$ B) $30^\circ, 60^\circ, 90^\circ$ C) $60^\circ, 60^\circ, 60^\circ$ D) $45^\circ, 45^\circ, 90^\circ$

25. Which is irrational?

- A) $\sqrt{16}$ B) $\sqrt{3}$ C) $\sqrt{25}$ D) $\sqrt{49}$

26. The mode of 2, 3, 3, 4, 5, 5, 5, 6 is:

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

27. If 5 pens cost Rs. 50, then 12 pens cost:

- A) 110 B) 120 C) 125 D) 130

28. Solve: $7x - 5 = 16$

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

29. Which is divisible by 9?

- A) 32 B) 42 C) 45 D) 52

30. If a triangle has sides 6, 8, 10, then it is:

- A) Isosceles B) Right-angled C) Equilateral D) Scalene

31. Which point lies on $y = 2x$?

- A) (2, 3) B) (3, 6) C) (1, 3) D) (2, 5)

32. Find HCF of 18 and 24.

- A) 2 B) 3 C) 6 D) 12

33. A shopkeeper marks Rs. 500 and gives 10% discount. Sale price = ?

- A) 440 B) 445 C) 450 D) 460

34. The square root of 196 = ?

- A) 12 B) 13 C) 14 D) 15

35. Simplify: $(1/2) + (3/4)$

- A) 1 B) 1.1 C) 1.25 D) 1.3

36. Which is the smallest prime?

- A) 0 B) 1 C) 2 D) 3

37. If perimeter of a square is 24 cm, each side = ?

- A) 5 cm B) 6 cm C) 7 cm D) 8 cm

38. The probability of tossing a head with a fair coin = ?

- A) $1/4$ B) $1/2$ C) $3/4$ D) 1

39. The value of $23 \times 322^3 \times 3^{223} \times 32 = ?$

- A) 18 B) 24 C) 72 D) 81

40. The sum of interior angles of a quadrilateral = ?

- A) 270° B) 360° C) 180° D) 300°

41. Which is a factorization of $x^2 + 7x + 12$?

- A) $(x + 2)(x + 4)$ B) $(x + 3)(x + 4)$ C) $(x + 6)(x + 2)$ D) $(x + 5)(x + 2)$

42. If $x^2 = 64$, then $x = ?$

- A) ± 6 B) ± 8 C) ± 10 D) ± 12

43. Convert 0.25 into a fraction.

- A) $1/2$ B) $1/4$ C) $1/5$ D) $3/10$

44. Which is not a polygon?

- A) Square B) Triangle C) Circle D) Pentagon

45. The diagonals of a square are always:

- A) Unequal B) Equal C) Parallel D) Same as sides

46. Find the mean of 2, 4, 6, 8.

- A) 3 B) 4 C) 5 D) 6

47. Solve: $3x + 7 = 16$

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

48. The perimeter of a triangle with sides 4, 5, 6 is:

- A) 12 B) 13 C) 15 D) 16

49. Which is a square number?

- A) 18 B) 20 C) 25 D) 27

50. Area of a parallelogram with base 10 and height 6 = ?

- A) 50 B) 60 C) 65 D) 70

51. Which is equivalent to $\frac{3}{5}$?
A) $\frac{6}{12}$ B) $\frac{7}{12}$ C) $\frac{9}{15}$ D) $\frac{8}{14}$
52. If diameter of a circle is 14, radius = ?
A) 6 B) 7 C) 8 D) 9
53. A bag has 2 red and 3 blue balls. Probability of red = ?
A) $\frac{1}{3}$ B) $\frac{2}{5}$ C) $\frac{3}{5}$ D) $\frac{1}{2}$
54. A cube has edge 4 cm. Volume = ?
A) 48 B) 60 C) 64 D) 72
55. Which is equivalent to $\frac{2}{8}$?
A) $\frac{1}{8}$ B) $\frac{1}{2}$ C) $\frac{1}{4}$ D) $\frac{1}{6}$
56. Which is the next prime after 31?
A) 33 B) 35 C) 37 D) 39
57. Area of rectangle $15 \times 8 = ?$
A) 110 B) 115 C) 120 D) 125
58. 40% of 250 = ?
A) 90 B) 100 C) 105 D) 110
59. Simplify: $(\frac{1}{3}) \div (\frac{2}{3})$
A) $\frac{1}{2}$ B) $\frac{2}{3}$ C) $\frac{3}{2}$ D) $\frac{1}{3}$
60. The cube root of 64 is:
A) 2 B) 3 C) 4 D) 5
61. The largest two-digit number is:
a) 90 b) 99 c) 100 d) 98
62. A 3D shape with a circular base and one curved surface is:
a) Sphere b) Cylinder c) Cone d) Cube
63. The perimeter of a triangle with sides 3 cm, 4 cm, and 5 cm is:
a) 10 cm b) 12 cm c) 11 cm d) 9cm
64. Which of these is an irrational number?
a) 4 b) $\frac{5}{2}$ c) 0.25 d) $\sqrt{2}$
65. The distance between two points is called:
a) Radius b) Length c) Width d) Height
66. Which of the following is not a polygon?
a) Square b) Triangle c) Circle d) Pentagon
67. The product of two odd numbers is always:
a) Even b) Odd c) Prime d) Composite

68. How many degrees are there in a complete turn?
a) 90° b) 180° c) 360° d) 270°
69. Which of the following is a proper fraction?
a) $5/2$ b) $3/4$ c) $4/4$ d) $7/3$
70. The middle value in a set of ordered numbers is called:
a) Mean b) Mode c) **Median** d) Range
71. The diagonals of a square are:
a) Unequal b) **Equal** c) Curved d) Parallel
72. Which is the largest fraction?
a) $1/3$ b) $2/5$ c) $3/4$ d) $4/5$
73. The unit of mass in the metric system is:
a) Metre b) **Kilogram** c) Litre d) Newton
74. A polygon with 8 sides is called:
a) Septagon b) **Octagon** c) Hexagon d) Pentagon
75. Which property is used in: $(a + b) + c = a + (b + c)$?
a) Commutative b) **Associative** c) Distributive d) Identity
76. Which number is a factor of both 18 and 24?
a) **6** b) 5 c) 8 d) 7
77. An angle exactly equal to 90° is called:
a) Acute angle b) **Right angle** c) Obtuse angle d) Reflex angle
78. The area of a square with side 5 cm is:
a) 10 cm^2 b) **25 cm^2** c) 20 cm^2 d) 15 cm^2
79. Which of these is a composite number?
a) 13 b) 17 c) **15** d) 19
80. The largest 3-digit number is:
a) 100 b) 1000 c) 9999 d) **999**
81. The smallest 2-digit number is:
a) 0 b) 11 c) **10** d) 9
82. Which term means "same shape but different size"?
a) Equal b) **Similar** c) Congruent d) Identical
83. The product of a number and its reciprocal is always:
a) 0 b) 2 c) **1** d) Infinity
84. A quadrilateral with two pairs of equal adjacent sides is called:
a) Rectangle b) **Kite** c) Trapezium d) Square

85. Which of these is not an integer?

- a) -5 b) 0 c) $\frac{1}{2}$ d) 10

86. Which of the following represents an odd number?

- a) 24 b) 31 c) 40 d) 64

87. A prism has how many bases?

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

88. Which of these is the smallest?

- a) 0.5 b) 0.75 c) 0.25 d) 1

89. The sum of all sides of a polygon is called:

- a) Area b) Perimeter c) Volume d) Surface area

90. How many degrees are there in a right angle?

- a) 45° b) 120° c) 90° d) 180°

91. Which of the following is a natural number?

- a) 0 b) -1 c) 5 d) -3

92. The square root of 81 is:

- a) 8 b) 9 c) 10 d) 7

93. A figure with three sides is called:

- a) Triangle b) Rectangle c) Square d) Circle

94. Which number is a multiple of both 4 and 6?

- a) 8 b) 12 c) 24 d) 16

95. Which shape has all sides equal and all angles 60° ?

- a) Square b) Equilateral triangle c) Rhombus d) Rectangle

96. Which of the following is the largest?

- a) $\frac{2}{5}$ b) $\frac{3}{5}$ c) $\frac{1}{5}$ d) $\frac{4}{10}$

97. Which is the correct symbol for “is less than”?

- a) = b) > c) < d) $\geq$

98. A straight line has how many endpoints?

- a) 1 b) 2 c) None d) Infinite

99. Which is an even prime number?

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

100. The point where two lines meet is called:

- a) Midpoint b) Vertex c) Centre d) Edge

101. Which number is not divisible by 5?

- a) 10 b) 25 c) 45 d) 42

102. A figure with six faces, all of which are squares, is a:

- a) Sphere b) Cone c) Cylinder d) **Cube**

103. The total number of sides in two pentagons is:

- a) 8 b) 9 c) **10** d) 12

104. The longest chord of a circle is the:

- a) Radius b) **Diameter** c) Circumference d) Arc

105. Which is a negative integer?

- a) 0 b) **-5** c) 2 d) 1

106. Which number is a common multiple of 3 and 4?

- a) 9 b) **12** c) 14 d) 20

107. A quadrilateral with opposite sides parallel is a:

- a) Trapezium b) **Parallelogram** c) Kite d) Pentagon

108. Which of the following is an acute angle?

- a) 95° b) 90° c) **60°** d) 120°

109. A 3D shape with two circular faces and one curved surface is:

- a) Cone b) **Cylinder** c) Sphere d) Cube

110. Which is the largest 1-digit number?

- a) 8 b) **9** c) 7 d) 6

111. A number multiplied by itself is called its:

- a) **Square** b) Cube c) Factor d) Multiple

112. Which of these is not a polygon?

- a) Square b) Hexagon c) **Oval** d) Triangle

113. The number which is added to itself gives double the number. This is called:

- a) Multiplication b) **Addition** c) Subtraction d) Division

114. Which fraction is greater?

- a) $\frac{2}{3}$ b) $\frac{3}{4}$ c) $\frac{4}{5}$ d) $\frac{1}{2}$

115. The perimeter of a rectangle with length 6 cm and width 4 cm is:

- a) 18 cm b) **20 cm** c) 22 cm d) 16 cm

116. Which is the correct Roman numeral for 50?

- a) V b) X c) **L** d) C

117. The face of a dice is in the shape of a:

- a) Triangle b) Rectangle c) **Square** d) Circle

118. The sum of 90° and 90° is:

- a) 100° b) **180°** c) 270° d) 360°

119. Which number is a prime number?

- a) 4 b) 6 c) 8 d) 7

120. A set of points all at the same distance from a fixed point is a:

- a) Square b) Circle c) Triangle d) Polygon

121. Which of the following is not a perfect square?

- a) 49 b) 64 c) 50 d) 81

122. The sum of the angles in a pentagon is:

- a) 360° b) 540° c) 720° d) 900°

123. Which property is used in $5 \times (4 + 2) = (5 \times 4) + (5 \times 2)$?

- a) Commutative b) Distributive c) Associative d) Identity

124. A triangle with two equal sides is called:

- a) Scalene triangle b) Isosceles triangle c) Equilateral triangle d) Right triangle

125. Which of the following is a prime factor of 21?

- a) 7 b) 9 c) 4 d) 8

126. Which number is both a square and a cube?

- a) 64 b) 36 c) 49 d) 81

127. The place value of 4 in 4,528 is:

- a) 40 b) 400 c) 4000 d) 4

128. The result of dividing one number by another is called:

- a) Remainder b) Quotient c) Product d) Factor

129. The line segment joining the centre of a circle to any point on the circle is the:

- a) Diameter b) Radius c) Chord d) Tangent

130. Which of these is the greatest?

- a) 0.25 b) 0.75 c) 1.0 d) 0.50

131. A triangle with all unequal sides is called:

- a) Isosceles b) Scalene c) Equilateral d) Right

132. Which is the Roman numeral for 100?

- a) L b) C c) D d) M

133. A solid figure with no faces, edges, or vertices is:

- a) Cube b) Cylinder c) Cone d) Sphere

134. Which term describes a number that can be written as a fraction?

- a) Irrational b) Rational c) Prime d) Composite

135. The sum of the digits in 245 is:

- a) 11 b) 12 c) 13 d) 10

136. Which shape has two pairs of parallel sides and all sides equal?

- a) Rectangle b) Rhombus c) Trapezium d) Kite

137. The perimeter of a square with side 7 cm is:

- a) 28 cm b) 21 cm c) 14 cm d) 35 cm

138. Which is the smallest prime number greater than 10?

- a) 11 b) 11 c) 13 d) 17

139. How many edges does a cube have?

- a) 8 b) 12 c) 6 d) 10

140. Which is the reciprocal of $\frac{2}{5}$?

- a) $\frac{5}{2}$ b) $\frac{5}{2}$ c) $\frac{2}{5}$ d) $\frac{1}{5}$

141. The sum of angles in a hexagon is:

- a) 360° b) 720° c) 540° d) 900°

142. The largest factor of a number is always:

- a) 0 b) The number itself c) 1 d) Half the number

143. Which number is an odd multiple of 5?

- a) 10 b) 15 c) 20 d) 30

144. Which is the largest 4-digit number?

- a) 999 b) 9999 c) 1000 d) 9000

145. A number that can only be divided by 1 and itself is:

- a) Composite b) Prime c) Even d) Multiple

146. The sum of 0.4 and 0.6 is:

- a) 0.9 b) 1.0 c) 1.1 d) 0.8

147. Which shape has exactly four sides?

- a) Pentagon b) Quadrilateral c) Hexagon d) Octagon

148. Which is the correct Roman numeral for 500?

- a) L b) C c) D d) M

149. A polygon with 10 sides is called:

- a) Nonagon b) Decagon c) Octagon d) Heptagon

150. The smallest factor of any number is always:

- a) 0 b) 1 c) The number itself d) 2

151. Which of these is a mixed number?

- a) $\frac{5}{3}$ b) $2\frac{1}{2}$ c) $\frac{1}{4}$ d) $\frac{3}{5}$

152. The result of multiplying two negative numbers is:

- a) Negative b) Positive c) Zero d) Prime

153. Which number is a perfect cube?

- a) 8 b) 27 c) 12 d) 18

154. The perimeter of an equilateral triangle with side 6 cm is:

- a) 12 cm b) 18 cm c) 24 cm d) 20 cm

155. Which number is divisible by 9?

- a) 45 b) 32 c) 55 d) 45

156. The value of 10^2 is:

- a) 10 b) 1000 c) 100 d) 20

157. The largest factor of 20 is:

- a) 10 b) 20 c) 5 d) 15

158. The number of sides in a nonagon is:

- a) 8 b) 7 c) 9 d) 10

159. Which of the following is an odd prime number?

- a) 19 b) 21 c) 25 d) 27

160. A number ending in zero is always divisible by:

- a) 2 b) 5 c) 10 d) 3

161. The square of 12 is:

- a) 122 b) 112 c) 144 d) 124

162. A line segment has how many endpoints?

- a) 2 b) 1 c) None d) Infinite

163. Which fraction is equal to 0.5?

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

164. The sum of three angles of a triangle is always:

- a) 90° b) 270° c) 180° d) 360°

165. Which number is between 0.7 and 0.9?

- a) 0.8 b) 0.6 c) 0.5 d) 1.0

166. A rectangle with length 5 cm and width 3 cm has area:

- a) 15 cm^2 b) 8 cm^2 c) 10 cm^2 d) 12 cm^2

167. Which of these is a prime factor of 15?

- a) 4 b) 5 c) 9 d) 12

168. How many hours are there in two days?

- a) 24 b) 12 c) 48 d) 36

169. The Roman numeral for 40 is:

- a) L b) X c) XL d) LX

170. Which is the largest 2-digit prime number?

- a) 89 b) 97 c) 91 d) 99

171. The smallest 3-digit number is:

- a) 101 b) 999 c) 100 d) 110

172. Which is the reciprocal of 3?

- a) $1/3$ b) $3/1$ c) $3/3$ d) 0.3

173. A heptagon has how many sides?

- a) 7 b) 6 c) 8 d) 9

174. The sum of 0.25 and 0.75 is:

- a) 0.9 b) 1.0 c) 1.1 d) 0.8

175. Which of the following is an even number?

- a) 13 b) 28 c) 17 d) 35

176. The largest factor of 15 is:

- a) 5 b) 15 c) 3 d) 10

177. Which number is a multiple of both 5 and 7?

- a) 25 b) 35 c) 35 d) 30

178. The sum of angles in a quadrilateral is:

- a) 360° b) 270° c) 180° d) 540°

179. Which number is greater?

- a) 0.75 b) 0.7 c) 0.8 d) 0.79

180. A 3D shape with all faces rectangles is:

- a) Cube b) Cuboid c) Cylinder d) Cone

181. Which is the smallest prime number greater than 20?

- a) 23 b) 21 c) 25 d) 27

182. The perimeter of a rectangle is $2 \times (\text{length} + \text{_____})$.

- a) Side b) Width c) Area d) Height

183. Which fraction is the smallest?

- a) $1/3$ b) $1/4$ c) $1/2$ d) $3/4$

184. The value of 5^3 is:

- a) 10 b) 15 c) 125 d) 25

185. Which number is divisible by both 2 and 9?

- a) 12 b) 20 c) 18 d) 15

186. A regular polygon with all sides and angles equal is called:

- a) Irregular polygon b) **Regular polygon** c) Scalene polygon d) Similar polygon

187. Which is the largest unit of length?

- a) Metre b) Centimetre c) **Kilometre** d) Millimetre

188. The number that is neither positive nor negative is:

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

189. Which of the following is an odd multiple of 3?

- a) 6 b) 12 c) **15** d) 18

190. Which number is a factor of both 25 and 35?

- a) 10 b) **5** c) 15 d) 7

191. The decimal form of $\frac{1}{5}$ is:

- a) 0.15 b) **0.2** c) 0.25 d) 0.5

192. A triangle with one obtuse angle is called:

- a) Acute triangle b) Right triangle c) **Obtuse triangle** d) Equilateral triangle

193. Which is the next prime number after 29?

- a) 30 b) 31 c) **31** d) 33

194. The product of 10 and 0.1 is:

- a) 10 b) 0.01 c) **1.0** d) 0.1

195. Which 3D shape has only one face?

- a) Cube b) **Sphere** c) Cone d) Cylinder

196. The sum of the first two prime numbers is:

- a) 3 b) **5** c) 4 d) 6

197. Which number is an even factor of 36?

- a) 5 b) **6** c) 9 d) 15

198. Which is the largest among 0.5, 0.55, 0.6, and 0.65?

- a) 0.6 b) 0.55 c) **0.65** d) 0.5

199. A 3D shape with no edges but one curved surface is:

- a) Cube b) **Sphere** c) Cylinder d) Cone

200. The value of 7×0 is:

- a) 7 b) 1 c) **0** d) 70

201. Which is the next multiple of 9 after 45?

- a) 53 b) **54** c) 55 d) 63

202. Which of the following is the greatest?

- a) $\frac{2}{3}$ b) $\frac{3}{5}$ c) $\frac{4}{5}$ d) $\frac{1}{2}$



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