



## THE HAMILTON ACADEMY

## Class 8 Mathematics

Section-AFill In The Blanks:

1. The property under multiplication used in the following:  $\frac{a}{b} \times \frac{b}{a} = 1$  is \_\_\_\_\_
2. Say True or False: Cube of any even number is even \_\_\_\_\_
3. Can we use histogram to show data of the number of students participated in a cultural competition from Class 7, Class 8 and Class 9? \_\_\_\_\_
4. Libin height is 3 Feet and his father Mehavel height is 6 Feet, the ratio is \_\_\_\_\_
5. The square root value of 64 is \_\_\_\_\_
6. If square a number end with 0 then its cube also ends with 0, Is it so? \_\_\_\_\_
7. All CPU are \_\_\_\_\_ in shape.

Choose The Correct Answer:

8. The ratio between the 90 matchsticks and 30 match boxes is \_\_\_\_\_
  - a) 10 : 3
  - b) 3 : 1
  - c) 2 : 1
  - d) 1 : 2

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9. What is the number of outcomes of tossing two coins together?
- a) 2
  - b) 4
  - c) 6
  - d) 8
10. Find the value of x, if  $\frac{x-1}{3} = 1$
- a) 4
  - b) 3
  - c) 1
  - d) 5
11. Which are quadrilaterals having four right angle at the point of intersection of diagonals?
- a) Square and rectangle
  - b) Rhombus and square
  - c) Rectangle and parallelogram
  - d) Square and parallelogram
12. How many diagonals intersecting at center of the regular hexagon?
- a) 9
  - b) 6
  - c) 3
  - d) 12
13. Find the smallest number by 245 must be divided to obtain perfect square?
- a) 5
  - b) 3
  - c) 7
  - d) 6
14. Which one of the following is not perfect cube?
- a) 81
  - b) 27
  - c) 8
  - d) 125
15. Angle sum of a convex polygon of 3 sides is \_\_\_\_\_degrees
- a) 180
  - b) 90
  - c) 60
  - d) 30

**Section - B**

16. A Merchant buys books for Rs.2340, each book costs Rs.20 then how many books he bought?
17. The upper face of the diamond is regular hexagon; draw the diagonals for the diamond?
18. Half of an apple is eaten by Rahul and half of another half of that apple is eaten by priya then what is the remaining part of apple?
19. What will be the tens digit in the cube of 5?
20. Using the given pattern find the missing number?
- a.  $1^2 + 2^2 + 1^2 = 6$
- b.  $1^2 + 2^2 + 1^2 + 2^2 = \underline{\quad}$
- c.  $1^2 + 2^2 + 1^2 + 2^2 + 1^2 = 11$
21. Without adding find the sum of the following  $1 + 3 + 5 + 7$
22. Draw the rough sketch for the quadrilateral NEXT  $NE = 4.5$  cm,  $EX = 7$  cm ,  
 $\angle N = 90^\circ$ ,  $\angle X = 110^\circ$
23. Ratio between Maya and Sarah scored in Mathematics is 1:2 out of 100 then what will be their marks?
24. Find the missing value  $5^2 + \underline{\quad} = 7^2$
25. Find the Volume of the cube of sides 8 cm?
26. In computer center, walk-ins in evening session is 10 % higher than morning session then what will be the walk-ins in morning if it is 20 members in evening?

**Section - C**

27. Find the square root of 1936 by prime factorization method?
28. What could be the possible 'one's' digit of the square root of each of the following:
- a) 9966  
b) 3311  
c) 8055
29. Draw two examples for simple curve and simple closed curve with alphabetical Letters?

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30. Why equilateral triangle, square and regular hexagon called regular polygon?
31. Lini scored 45 marks out of 50 and joy scored 70 out of 75. What is the ratio between those two girls?
32. Draw three examples for concave polygon?
33. Nithi bought 3 golden fish for rupees 30, pavi bought 2 black fishes for Rs. 20, sri bought 4 small sharks for Rs.64. Draw the Pie chart for this data?
34. A man got 20% hike in his salary. If his new salary in new company is 1, 33,113 rupees then find his current salary?
35. What is convex quadrilateral? Give real life example? How many diagonals are there?
36. Find x,  $\frac{x}{2} - \frac{1}{3} = \frac{5}{6}$
37. Find the cube values of 9 and 11

### **Section- D**

38. Draw the two convex polygon having 4 and 5 sides (use angle sum of polygon with n sides concept) and explain?
39. Mouya is building magic square (with building blocks), if she has 4 cm, 4 cm, 4 cm cuboids (building blocks) then how many cuboid she needs to make a perfect magic square?
40. Find the perfect cube by prime factorization method for the following?  
a) 729  
b) 5832
41. Alphabets A, B, ..., J written on the flash cards and kept in fish bowl. Arun is asked to take one flash card from the fish bowl. What is the probability of getting letters in his name?
42. Create the font for the numbers 0, 1, 2, ..., 9 and those font having the same number of angles.  
Example: The number zero has zero angles. That is no angle for the number zero.