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CREATING AND SETTING EXAMPLES FOR FUTURE...

CLASS VIII MATHS FULL LENGTH TEST

TIME: 3 HR.   **M.M.: 80**

GENERAL INSTRUCTIONS:

1. All questions are compulsory.

2. The question paper consists of 28 questions divided into 4 sections A, B, C and D. **Section A** comprises of 4 questions of 1 mark each, **Section B** comprises of 9 questions of 2 marks each, **Section C** comprises of 6 questions of 3 marks each and **Section D** comprises of 9 questions of 4 marks each.

Section - A

1. Two unbiased coins are tossed simultaneously. Find the probability of getting: at most one head.   **1**

2. Write the number in the usual form 1.0001×10^9.   **1**

3. What number should be added to $\dfrac{-5}{11}$ so as to get $\dfrac{26}{33}$?   **1**

4. If 2x 5 is divisible by 3, where x is a digit find the value of x.

   1

Section - B

5. Write a Phythagorean triplet whose one member is 16.   **2**

6. Find the square root of $10\dfrac{2}{3}$ correct to three places of decimal.   **2**

7. Using column method find the cube of 85.   **2**

8. Factorise : $x^2 + 8x + 16$.   **2**

9. Show that – 17576 is a perfect cube. Also, find the number whose cube is –17576.   **2**

10. Three numbers are in the ratio 2 : 3 : 4. The sum of the cubes is 33957. Find the numbers.   **2**

11. Find the side of a cube whose volume is $\dfrac{24389}{216}$ m^3.   **2**

12. In a quadrilateral ABCD, the angles A, B, C and D are in the ratio 1 : 2 : 3 : 4. Find the measure of each angle of the quadrilateral.   **2**

13. Find the length of a side of a square playground whose area is equal to the area of a rectangular field of dimensions 72 m and 338 m.   **2**

Section - C

14. Verify associativity of addition of rational numbers i.e., (x + y) + z = x + (y + z), when: **3**

   (iv) x = –2, $y = \dfrac{3}{5}, z = \dfrac{-4}{3}$ (ii) $x = \dfrac{-2}{5},\ y = \dfrac{4}{3}, z = \dfrac{-7}{10}$

15. Solve: $(2x + 3)^2 + (2x - 3)^2 = (8x + 6)(x - 1) + 22$ **3**

16. The length of a rectangle exceeds its breadth by 4 cm. If length and breadth are each increased by 3 cm, the area of the new rectangle will be 81 cm^2 more than that of the given rectangle. Find the length and breadth of the given rectangle.   **3**

17. The measures of two adjacent angles of a quadrilateral are 125° and 35° and the other two angles are equal. Find the measure of each of the equal angles. **3**

18. Use identify and simplify : $\dfrac{52^2 - 18^2}{34}$. **3**

19. The difference between the compound interest and simple interest on a certain sum of money at 10% per annum for 2 years is Rs 500. Find the sum when the interest is compounded annually. **3**

Section - D

20. Find the square roots of 2304 and 1764 and hence find the value of $\dfrac{\sqrt{0.2304} + \sqrt{0.1764}}{\sqrt{0.2304} - \sqrt{0.1764}}$ **4**

21. A V.C.R. and TV were bought for Rs. 8,000 each. The shopkeeper made a loss of 4% on the V.C.R. and a profit of 8% on TV. Find the gain or loss percent on whole transaction. **4**

22. Find the squares of the following **4**

a. 105 using diagonal method.   b. 84 using column method

23. Evaluate: (i) $\sqrt[3]{121} \times \sqrt[3]{297}$ (ii) $\sqrt[3]{\dfrac{0.027}{0.008}} \div \sqrt{\dfrac{0.09}{0.04}} - 1$ **4**

24. Construct a quadrilateral ABCD such that AB = BC = 5.5 cm, CD = 4 cm, DA = 6.3 cm & AC = 9.4 cm. Measure BD. **4**

25. Construct a quadrilateral ABCD given AB = 5.3 cm, AD = 2.9 cm, ∠A = 70°; ∠B = 95°, ∠C = 85°. **4**

26. The weekly wages of 30 workers in a factory are given: **4**

830, 835, 890, 810, 835, 836, 869, 845, 898, 890, 820, 860, 832, 833, 855, 845, 804, 808, 812, 840, 885, 835, 835, 836, 878, 840, 868, 890, 806, 840

a. Mark a frequency table with intervals as 800-810, 810-820 and so on, using tally marks.

b. Also, draw a histogram   c. answer the following questions:

(i) Which group has the maximum number of workers?

(ii) How many workers earn Rs 850 and more?

(iii) How many workers earn less than Rs 850?

27. The number of students admitted in different faculties of a college are given below: **4**

Faculty	Science	Arts	Commerce	Law	Education	Total
Number of students	1000	1200	650	450	300	3600

Draw a pie-chart to represent the above information.

28. 17 cards numbered 1, 2, 3, ..., 17 are put in a box and mixed thoroughly. One person draws a card from the box. Find the probability that the number on the card is: **4**

(i) odd   (ii) a prime   (iii) divisible by 3   (iv) divisible by 3 and 2 both

29. Evaluate : **a.** $\dfrac{\left(3^{-2}\right)^2 \times \left(-5^2\right)^{-3} \times \left(7^{-3}\right)^2}{\left(3^2\right)^5 \times \left(5^3\right)^{-2} \times \left(7^{-4}\right)^3}$ **b.** Divide : $12xy\,(9x^2 - 16y^2) \div 4xy\,(3x + 4y)$ **4**