

KOTHARI INTERNATIONAL SCHOOL, NOIDA

TERM END ASSESSMENT, 2023-2024

GRADE 8 SUBJECT: MATHEMATICS

SET: A SECTION B (SUBJECTIVE QUESTIONS)

DAY & DATE: Thursday, 07.03.2024

TIME ALLOWED: 2 hr 30 Mins.

NAME: _____

MAXIMUM MARKS: 60

GENERAL INSTRUCTIONS:

1. This question paper consists of 3 pages and 22 questions.
2. It is compulsory to attempt all the questions.
3. Show steps/working wherever necessary.

Do as directed: -

Q1. Find the greatest 4 - digit number which is a perfect square? **2M**

Q2. Attempt any one from the following: **2M**

A person shops and spends 75% of his money. If he is left with Rs. 600 now, find out how much money he had in the beginning.

OR

Find the cost price of an article when:

SP = ₹34.40 and Gain = $7\frac{1}{2}\%$

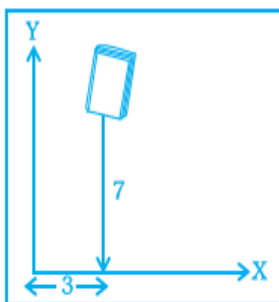
Q3. Find the value of: $\sqrt[3]{27 \times 2744}$ **2M**

Q4. The area of a rectangle is $x^2 + 19x - 20$. Find the possible length and the breadth of the rectangle.

2M

Q5. An iron cube has each side equal to 5cm. Find its volume and also its weight in Kg if 1 cu.cm of iron weighs 50 grams. **2M**

Q6. Fill in the blanks for the given figure: **2M**



a. _____ are the coordinates for the position of the book on the table. (1)

b. If the book is moved 3 units to the left, its coordinates will lie on the _____ axis. (1)

Q7. Fourteen sheets of a book weigh 35 grams. How many sheets will weigh 1.5 kg? **2M**

Q8. State true or false for the following and justify your answer with an example: **2M**

(i) If a number is doubled then its cube is 27 times the given number.

(ii) The length of the side of a cube is 5cm so its surface area is 150 sqm.

- Q9.** Find the least number which must be subtracted from 1886 so as to get a perfect square. What is the square root of the new number? **2M**
- Q10. Solve:** $((2x - 3)/(4x + 5)) = (1/3)$ **2M**
- Q11.** A fancy fan is marked at Rs 15600 and it is available for Rs 12480. Find the discount given and discount percent **2M**
- Q12. Factorise:** $36p^2 - 84pq + 49q^2$ **3M**
- Q13.** A lawnmower takes 750 complete revolutions to cut grass on a field. Calculate the area of the field if the diameter of the lawnmower is 84 cm and the length is 1 m. **3M**
- Q14. Answer the following questions:** **3M**
- (a) What must be added to $x^3 + 3x - 8$ to get $3x^3 + x^2 + 6$? (2)
- (b) Write the numerical coefficient of x^3 from the answer you get in part (a). (1)
- Q15. Using the identity, solve for the value of 'a':** $8a = 35^2 - 27^2$ **3M**
- Q16.** A fort had provisions for 300 men for 90 days. After 20 days, 50 men left the fort. How long would the food last at the same rate? **3M**
- Q17. For the expression: $2y^2 - 3y^2 + 4y^3$** **3M**
- (a) Write all the unlike terms. (1)
- (b) Write all the factors of the terms. (1)
- (c) Classify the expression as Monomial, Binomial or Trinomial (1)
- Q18. Answer the questions:** **4M**
- (i) Check and show that (6, 8, 10) is a Pythagorean triplet? (1)
- (ii) If the area of a square is 1296 cm^2 , find the measure of its side. (1)
- (iii) Find the least square number which is divisible by each of the number 4, 8 and 12. (2)
- Q19. Compute the following:** **4M**
- Maria invested ₹ 8,000 in a particular business. She would eventually be paid interest at 5% per annum compounded annually. Find out:
- (i) The amount credited against her name, at the end of the second year. (2)
- (ii) The interest for the third year (2)
- Q20. Fill in the blanks with correct answers:** **4M**
- (a) $9x - (\text{_____}) = -21$ has the solution -2 (1)
- (b) In a linear equation, the maximum power of the variable in the equation is ____ (1)
- (c) If $x/5 + 30 = 18$, then $x = \text{_____}$ (1)
- (d) While solving a linear equation, there can be _____ value/s (one/many) for the variable. (1)

Q21. Case Study: (Attempt any one of the following)

4M

The students of KIS were asked to participate in a competition for making and decorating penholders in the shape of a cylinder with a base, using cardboard. Each penholder was to be of radius 3 cm and height 10.5 cm. The Art department of KIS was to supply the competitors with cardboard for the same. If there were 35 competitors, how much cardboard was required to be bought for the competition?

OR

The lateral surface area of a hollow cylinder is 4224 sqcm. It is cut along its height and formed a rectangular sheet of width 33 cm. Find the perimeter of the rectangular sheet.

Q22. If y -coordinate is 3 times x -coordinate,

4M

- a. Make a table for it. (1)
- b. Draw a graph by taking at least 3 points and joining them with the origin. (2)
- c. Write what is such a graph called? (1)
