

CADET COLLEGE PETARO

SYLLABUS OUTLINE MATHEMATICS - VIII

1. Sets.
2. Rational Numbers.
3. Decimals
4. Exponents
5. Square root
6. Variations
7. Financial Arithmetic
8. Algebraic Expressions
9. Linear equations
10. Fundamental Geometry
11. Practical Geometry.
12. Circumference, Area & Volume
13. Information Handling

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CLASS-VIII MODEL TEST PAPER MATHEMATICS

Time: 1 Hour

Max. Marks: 100

SECTION-A (OBJECTIVE) [20 MARKS]

Q.1.a Choose the correct answer for each from the given options.

- i) $\{2,4,5,7\} - \{1,2,3,5,6\} =$ _____
(A) $\{4, 6\}$ (B) $\{4, 7\}$ (C) $\{1, 2, 3, 4, 5, 6, 7\}$ (D) none
- ii) A singleton set consist _____ element/elements.
(A) No (B) one (C) two (D) three
- iii) $x + y = y + x$, this is called law of addition.
(A) Commutative (B) Associative (C) Distributive (D) none
- iv) A polynomial having one term is called .
(A) linear (B) binomial (C) monomial (D) none
- v) The additive inverse of $\frac{2}{3}$ is
(A) $\frac{2}{3}$ (B) $-\frac{2}{3}$ (C) $\frac{3}{2}$ (D) $-\frac{3}{2}$
- vi) If $x : 2 = 12 : 6$ then $x = ?$
(A) 3 (B) 4 (C) 6 (D) 12
- vii) $1+2+3+4+5+6+5+4+3+2+1=?$
(A) 42 (B) 52 (C) 62 (D) 72
- viii) Which one of the following is true?
(A) $d = 2r$
 $d = r\pi$ (B) $r = 2d$ (C) $c\pi = d$ (D)
- ix) $(-4) \cdot n$ is negative when n is _____.
(A) Even (B) odd (C) even odd both (D) none
- x) A floor has an area of 100 square meters. What is the perimeter of floor?
(A) 10cm (B) 20cm (C) 40cm (D) none

Q.1.b Fill in the blanks

- (i). Two set are said to be equal set if they have _____ of elements.
- (ii). $\{1,2,4,5,6\} \cup \{2, 3, 5, 7, 8\} =$ _____
- (iii). $2 \frac{1}{3} + 3 \frac{2}{3} - \frac{8}{2} =$ _____
- (iv). $3x^2y \times 9x^2y =$ _____
- (v). $(3a - 4b)^2 - (3a - b)^2 =$
(_____) (_____)
- (vi). The set of _____ numbers is the union of rational and irrational numbers
- (vii). A _____ number is a number which has only two different factors 1 and the number itself.
- (viii). Proportion is the equality of _____ ratio /ratios
- (ix). The largest of the factors common to or more number is called the _____
- (x). Length of rectangle = _____ cm ,when breadth= 6cm and Perimeter = 28 cm

SECTION-B [80 MARKS]

NOTE: ATTEMPT ALL QUESTIONS. EACH QUESTION CARRIES 10 MARKS.

Q.1 (a) Find $A - B$ and $B - A$ from the following sets.

$$A=\{4,5,6\} \text{ and } B=\{5,6,7,8\}$$

(b) $U=\{1,2,3,4,\dots\dots\dots 10\}$, $A=\{1,2,3,4,5,6,7\}$ and $B =\{2,4,6,8,10\}$. Find $A' \cap A$

Q.2 Verify the following

(i) $\frac{7}{15} \times \left(\frac{3}{4} \times \frac{5}{7}\right) = \left(\frac{7}{15} \times \frac{3}{4}\right) \times \frac{5}{7}$

(ii) $-\frac{5}{8} \times \left(\frac{4}{7} - \frac{2}{3}\right) = \left(-\frac{5}{8} \times \frac{4}{7}\right) -$

$\left(-\frac{5}{8} \times \frac{2}{3}\right)$

Q.3 Find the Square root by division method /Factor method. (i) 1600 (ii) 6.25

Q.4 Twelve workers are needed to build a bungalow in 64 days. How many days will 18 workers, working at the same speed, take to build the same bungalow?

OR

Quantity of petrol in the fuel tanks of cars A, B and C is the ratio 7: 9: 11. If total quantity of petrol consumed by these three cars is 162 liters; find the consumption of each car.

Q.5 Construct a parallelogram $ABCD$ in which $m\overline{BC} = 6$ cm , $m\overline{CD} = 4$ cm and $m\overline{BD} = 7.3$ cm

Q.6 Find the factors of the following:

(i) $m^4 - m^3 + m^2$

(ii) $b^2 - d^2$

(iii) $z^2 + 12z + 3$

Q.7 Solve and verify the following equations.

(i) $3y + 9 = 18$

(ii) $\frac{x-1}{x+2} = \frac{4}{3}$

Q.8 A mobile phone company uses a markup rate of 55% on the cost of each mobile phone the cost Rs. 2,260. Find the selling price of mobile phone.

OR

An imported LED TV is sold for Rs. 55,800 inclusive of GST. Find the cost of LCD excluding tax. GST rate is 17%.