

Jender Heart High School, Sec.-33B chd.

Class: VII

Teacher: Gupta

Subject: Mathematics

Revision

(Ch-6: Sets, Ch-10: Profit and loss, Ch-11: Simple Interest, Ch-12: Speed, Distance and Time, Ch-14: linear equations, Ch-18: Properties of Triangles, Ch-21: Congruence, Ch-22: Constructions, Ch-23: Mensuration, Ch-25: Probability)

Quest 1: a) Write the following in 'Set builder form'

(i) $A = \{1, 2, 3, 4, 5, 6, 7, 8, 9, 10\}$

(ii) $B = \{2, 3, 5, 7, 11, 13, 17, 19\}$

(iii) $C = \{3, 6, 9, 12, 15, 18, 21\}$

(iv) $D = \{a, e, i, o, u\}$

(v) $E = \{0\}$

(vi) $F = \{m, a, t, h, i, c, s\}$

b) Write the following in 'Roster form'

(i) $A = \{x : x \text{ is a composite number, } x < 25\}$

(ii) $B = \{x : x \text{ is an even prime number}\}$

(iii) $C = \{x : x \in \mathbb{I}, -5 < x < 8\}$

c) (i) $A = \{x : x \text{ is a letter in the word FLOWER}\}$

$B = \{x : x \text{ is a letter in the word FOLLOWER}\}$

find $n(A)$; $n(B)$; Roster form of A and B;

$A = B$; $A \leftrightarrow B$

d) Write all the subset of $A = \{3, 4\}$

e) ~~4~~ $A = \{1, 2, 3, 4, 5, 6\}$ $B = \{4, 5, 6, 7, 8\}$

(i) $A \cup B$ (ii) $A \cap B$

(iii) $A - B$ (iv) $B - A$

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Quest 2 (i) On selling a fan for ₹4700, a shopkeeper loses 6%. At what price must he sell it to gain 6%?

(ii) On selling a chocolate for ₹105, the shopkeeper loses ₹15, find his loss and loss per cent.

(iii) Find the simple interest on ₹19200 for 11 months at $9\frac{3}{4}\%$ p.a.

(iv) At what rate per cent p.a will ₹1625 amount to ₹2080 in $3\frac{1}{2}$ yrs.

v) At simple interest a sum becomes $\frac{7}{4}$ of itself in 5 yrs. The rate of interest is ____.

Quest 3 (i) Convert into m/sec : 72 km/hr.

(ii) Convert into km/hr : 50 m/sec.

(iii) A train 120m long is running at 54 km/hr. In how much time will it pass a bridge 180m long?

(iv) A train 180m long crosses a standing man in 12 seconds. Find the speed of the train in km per hour.

Quest 4 a) Solve the following equations:

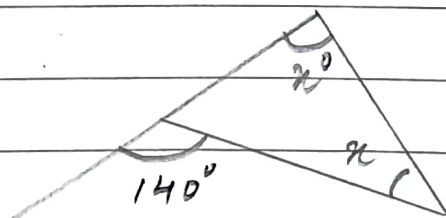
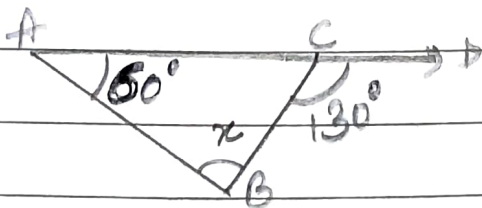
$$(i) \frac{3x}{4} - \frac{(x-4)}{3} = \frac{5}{3} \quad (iii)$$

$$(ii) \frac{2-9x}{16+5x} = 0$$

$$3(x-5) - 16x = 12 - 2(x-3)$$

- b) (i) Three numbers are in the ratio $4:5:6$ and their sum is 135 , find the numbers
- (ii) What number must be added to 54 so that the resulting number is 7 times the number added?
- (iii) The length of a rectangular park is twice its breadth. If the perimeter of the park is 186m , find its length and breadth

- Quest 5 (i) Is it possible to form a triangle if
- (a) sides are 10cm , 7cm , 4cm
- (b) angles are 30° , 60° , 90°
- (ii) The angles of a triangle are in the ratio $6:7:5$. Find the measure of each of the angles.
- (iii) Find the value of x



- (iv) find the value of hypotenuse of a right angled Δ if the other two sides are 32cm and 60cm .