Problems on number

1. The sum of 2 numbers is 36 and product is 248. what will be reciprocal

$$A + B = 36 \quad AB = 248$$

$$\frac{1}{A} + \frac{1}{B} = \frac{B + A}{AB} = \frac{36}{248} = 9/62/1$$

2. In a Poultry farm having hens and pigs Rohan can see 84 heads and 282 legs. How many are hen

$$H + P = 84 \qquad -① \times 4$$
$$2H + 4P = 282 \quad ②$$

$$4H + 4P = 24 \quad -4P = 536 - 282$$
$$H = 27$$

3. Summation of 5 consecutive numbers is found out to be 335. If we add largest & smallest what will we get

$$x, x+1, x+1 \quad x+3 \quad x+4 \quad x \quad 335$$
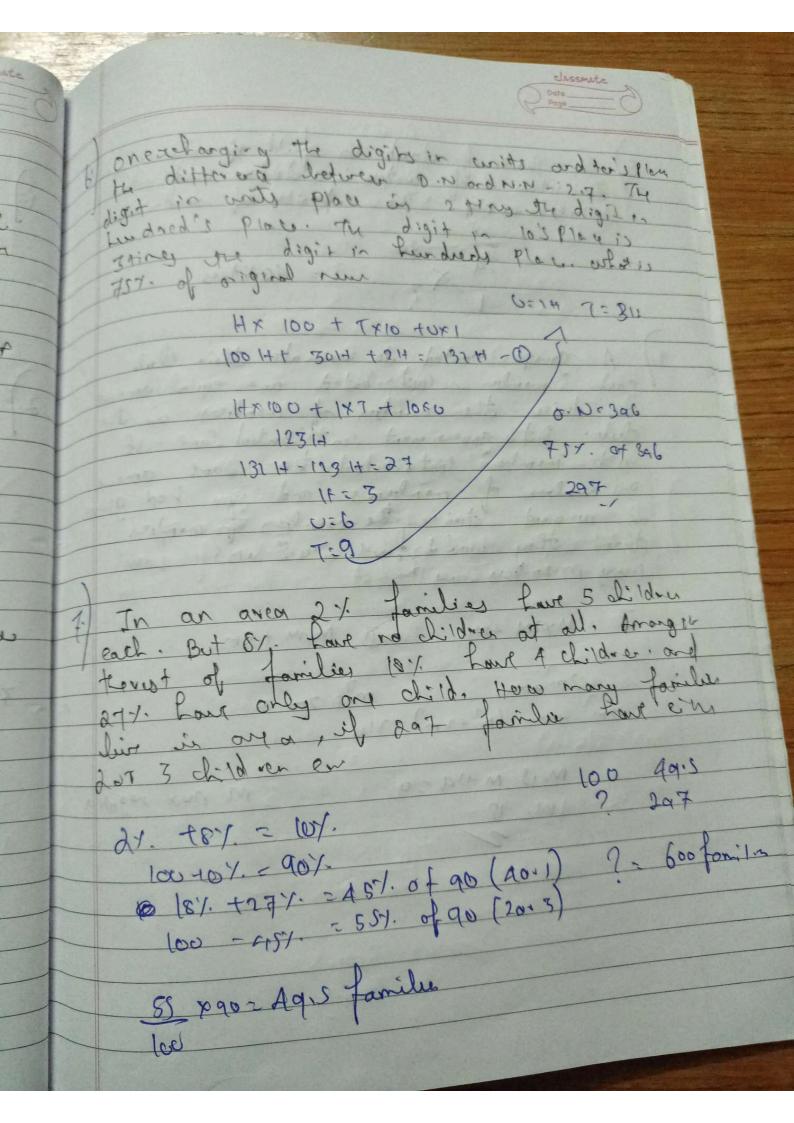$$5x + 10 = 335$$
$$x = 65$$

$$65 + 69 = 134$$

4.) Sina Ray was not paying attention in class, instead of multiplying M by $3/4$ he divided by $3/4$. The led to difference of 14 between the two answers. what is value of M?

$$M \times \frac{3}{4} - \frac{M}{3/4} = 14$$

$$\frac{3M}{4} - \frac{4M}{3} = 14 \qquad \text{Tho - choose}$$

$$M = 24$$

5) Raman has 2 urns. Both these urns has some pebbles. If 20 pebbles from urn B are shifted to urn A then, the number of pebbles in each urn become interchanged. But if 10 pebbles from urn A are put into urn B, then number of pebbles in B are twice the number in A. How many pebbles do A and B have respect.

Urn A	Urn B
A	B
	B-20
2(A-10)	B

$$B - 20 = A$$
$$B - A = 20 \quad ①$$

$$2A - B = 10 \quad -②$$

$$\downarrow + ①$$

$$A = \frac{50}{2}$$

$$B = 70$$

6) One exchanging the digits in units and ten's place the difference between O·N and N·N = 27. The digit in units place is 2 times the digit in hundred's place. The digit in 10's place is 3 times the digit in hundreds place. What is 75% of original num

O = 14   7 = 31

$$H \times 100 + T \times 10 + U \times 1$$

$$100 H + 30 H + 2H = 132 H - ①$$

$$H \times 100 + 1 \times T + 10 U$$

$$123 H$$

$$131 H - 129 H = 27$$

$$1H = 3$$
$$U = 6$$
$$T = 9$$

O·N = 396

75% of 396

297

7) In an area 2% families have 5 children each. But 8% have no children at all. Among the rest of families 18% have 4 children, and 27% have only one child. How many families live in area, if 297 families have e the 2 or 3 children each

100   99·s
?   297

$$2\% + 8\% = 10\%$$
$$100 + 10\% = 90\%$$
⊘ $18\% + 27\% = 45\%$ of 90 (40·1)
$$100 - 45\% = 55\% \text{ of } 90 (20·3)$$

? = 600 families

$$\frac{55}{100} \times 90 = 49.5 \text{ families}$$

8.) 3/4 part of tank is full of water. 30 litres of water is taken out it becomes empty. The capacity of tank

$$\frac{3}{4} \times \frac{30}{?}$$
$$1 \qquad ? \qquad ? = 40 \text{ litres}$$

9.) A group wanted to renovate their club. Each member contributed an equal amount to twice the number of members in the club. But government contributed same. If each member contributed the same amount as number of members and gov had given an amount twice the number of members then they would have 210 ₹ less. How many members are there

I. $M \times 2M + M$ II. $M \times M + 2M$

$2m^2 + m$ $m^2 + 2m$

$2m^2 + m - (m^2 + 2m) = 210$

$M - 15 \quad M + 14 \geq 0$ M nur negative

$M = 15$

10) Two digit number A is formed by reversing the digits of B. B is 15 less than A. The sum of B is 9. What is 9?

B	A
TU	UT
$10T + U$	$100U + T$

$T + U = 9$ ——①

$(10T + U) = (10U + T) - 15$

$T - U = -5$ ——②

$T + U + T - U = 9 - 5$

$2T = 4$ $T = 2$ $2 - U = -5$

$U = 7$

A	B
7	27

11) 280 oranges are divided among some boys and girls whose total number is 50 so that each boy gets 5 oranges and each girl get 7 oranges. The number of girl is

$B + G = 50$ $\times 5$

$5B + 7G = 280$

$5B + 5G = 40$

$5B + 7G - 5B - 5G = 280 - 250$

$G = 15$