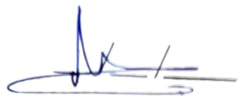


Revision - Day 02/10

Chp → Linear eqns.


BIVASH SIR.

- ① A boat goes 30 km upstream & 44 km downstream in 10 hours. In 13 hours, it can go 40 km upstream & 55 km downstream. Determine the Speed of the Stream & that of the boat in still water.

Ans. Speed of boat is 8 km/h & Speed of stream is 3 km/h.

- ② 8 men & 12 boys can finish a piece of work in 10 days while 6 men & 8 boys can finish it in 14 days. Find the time taken by one man alone & that by one boy alone to finish the work.

- ③ Draw the graph of $2x+y=6$ & $2x-y+2=0$. Shade the region bounded by these lines & x axis. Find the area of the shaded region.

- ④ Solve for x & y : (i) $\frac{b}{a}x + \frac{a}{b}y = a^2 + b^2$, (ii) $x+y=2ab$.
(ii) $152x - 378y = -74$ & $-378x + 152y = -604$.

- ⑤ For which values of a & b does the following pair of L. eqns have an infinite no. of sol's.?

$$2x+3y=7$$

$$(a-b)x + (a+b)y = 3a+b-2$$

- ⑥ For which value of k will the following pair of L. eqns have no solution?

$$3x+y=1, (2k-1)x + (k-1)y = 2k+1.$$

⑦ Assertion-Reason based Q.

- A: The lines $2x-5y=7$ & $6x-15y=8$ are parallel lines
R: The system of eqns $a_1x+b_1y+c_1=0$ & $a_2x+b_2y+c_2=0$ has infinitely many solutions if $\frac{a_1}{a_2} = \frac{b_1}{b_2} = \frac{c_1}{c_2}$.

Short Q.

- ⑧ Find the coordinates where the line $x-y=8$ will intersect y axis.

- ⑨ Write the no. of solutions of the pair of eqns $x+2y-8=0$, $2x+4y=16$