

- 1.) find k . For which one root of the equation $kx^2 - 14x + 8 = 0$ is 2.
- 2) find a , for which the point $P(\frac{x}{3}, 2)$ is the mid point of the line segment joining the points $(-5, 4)$ and $(-1, 0)$
- 3) if n^{th} term of the AP is $2n+1$. find the sum of first 3 term of the AP
- 4) find the coordinates of the point P which divides the join of $A(-2, 5)$ and $B(2, -5)$ in the ratio $2:3$
- 5) Show that $7-\sqrt{5}$ is irrational.
- 6) if 7 times the 7th term of an AP is equal to 11 times the 11th term, then find its 18th term
- 7) find the 15th term from the end of the AP
3, 8, 13, --- 248.
- 8) for what value of p , the following pair of equations have infinitely many solutions
 $(p-3)x + 3y = p$ and $px + py = 12$.
- 9) A card is drawn at random from a well shuffled deck of 52 cards. find the prob of getting neither a red card nor a queen.
- 10) use Euclid division algorithm to find the HCF of 726 and 275
- 11) find the zeroes of the poly $555x^2 + 30x + 855$ and verify the relationship between zeros and coefficients. of the polynomial.

13) Places A and B are 80 km apart from each other on a highway. A car starts from A and another from B at the same time. If they move in the same direction they meet in 8 hr. But if they move towards each other, they meet in 1 hr & 20 minutes. Find the speed of cars.

14) Find k for which the points $(3k-1, k-2)$, $(k, k-7)$ and $(k-1, -k-2)$ are collinear

15) The points $A(1, -2)$, $B(2, 3)$, $C(k, 2)$ and $D(-4, 3)$ are the vertices of a parallelogram, find k .

16) Solve for x !

$$\frac{1}{a} + \frac{1}{b} + \frac{1}{x} = \frac{1}{a+b+x}$$

17) A train takes 2 hrs less for a journey of 300 km if its speed is increased by 5 km/hr from its usual speed. ~~find the usual speed~~ find the usual speed of the train.

18) An AP consists of 50 terms of which 3rd term is 12 and the last term is 106. Find the 29th term

19) If the median of a data is 28.5 find the value of x and y .

CI	0-10	10-20	20-30	30-40	40-50	50-60	Total
No. of students	5	x	20	15	y	5	60

20) Solve for x and y

$$\frac{10}{n+y} + \frac{2}{n-y} = 4 \quad \text{and} \quad \frac{15}{n+y} - \frac{5}{n-y} = -2$$

21) Obtain all the zeroes of the poly. $3x^4 + 6x^3 - 2x^2 - 10x - 5$
If 2 of its zeroes are $\frac{\sqrt{5}}{3}$, $-\frac{\sqrt{5}}{3}$.