1. Solve : $\frac{(x+4)}{(x-1)}=\frac{(3x+6)}{(2x+4)}$

   (i) $(2,-11)$ (ii) $(-3,10)$ (iii) $(-4,8)$ (iv) $(1,14)$ (v) $(-2,11)$

2. Solve : $\frac{(x-11)}{(x-2)}+\frac{(x-6)}{(x-8)}=\frac{87}{55}$

   (i) $(\frac{342}{25},14)$ (ii) $(\frac{314}{23},10)$ (iii) $(\frac{316}{23},13)$ (iv) $(\frac{290}{21},12)$ (v) $(\frac{318}{23},15)$

3. Solve : $(x^2-3x)^2-10(x^2-3x)+24=0$

   (i) $(\frac{3}{2}+\frac{1}{2}\sqrt[4]{33}),(\frac{3}{2}-\frac{1}{2}\sqrt[4]{33}),5,0$ (ii) $(\frac{3}{2}+\frac{33}{2}),(\frac{3}{2}-\frac{33}{2}),3,(-2)$ (iii) $(\frac{5}{2}+\frac{1}{2}\sqrt{33}),(\frac{5}{2}-\frac{1}{2}\sqrt{33}),6,1$

   (iv) $(\frac{1}{2}+\frac{1}{2}\sqrt{33}),(\frac{1}{2}-\frac{1}{2}\sqrt{33}),2,(-4)$ (v) $(\frac{3}{2}+\frac{1}{2}\sqrt{33}),(\frac{3}{2}-\frac{1}{2}\sqrt{33}),4,(-1)$

4. Solve : $(x^4-6x^2+9)=0$

   (i) $\sqrt[4]{3},(-\sqrt[4]{3}),\sqrt[4]{3},(-\sqrt[4]{3})$ (ii) $3,(-3),3,(-3)$ (iii) $\sqrt{5},(-\sqrt{5}),\sqrt{6},(-\sqrt{6})$ (iv) $1,(-1),\sqrt{\frac{1}{3}},(-1)$

   (v) $\sqrt{3},(-\sqrt{3}),\sqrt{3},(-\sqrt{3})$

5. Solve : $(x+8)(x+9)(x+10)(x+11)=5040$

   (i) $(-2),(-19)$ (ii) $(-3),(-20)$ (iii) $(-1),(-18)$ (iv) $2,(-15)$ (v) $0,(-17)$

6. For what values of k are the roots of $(k-3)x^2+(k+6)x+(k+21)=0$ equal

   (i) $((-22),3)$ (ii) $((-22),1)$ (iii) $((-24),4)$ (iv) $((-23),3)$ (v) $((-23),4)$

7. If p and q are the roots of $(x^2-36)=0$, find the equation whose roots are $p+\frac{1}{q}$ and $q+\frac{1}{p}$

   (i) $(24x^2-10x-875)=0$ (ii) $(36x^2-1225)=0$ (iii) $(12x^2-4x-385)=0$ (iv) $(12x^2+4x-385)=0$

   (v) $(48x^2-10x-1575)=0$

8. If 9 is the root of $(x^2+kx+54)=0$, find k and the other root

   (i) k=-15 , and the other root =6 (ii) k=-12 , and the other root =9 (iii) k=-18 , and the other root =4

   (iv) k=-14 , and the other root =7 (v) k=-16 , and the other root =5

9. If $ax^2 + bx + c$ is exactly divisible by $(x-7), (x+2)$ and leaves a remainder of 70 when divided by $(x+7)$, find a, b and c

(i) $a=1, b=-6, c=-15$ (ii) $a=1, b=-5, c=-14$ (iii) $a=1, b=-7, c=-17$ (iv) $a=1, b=-3, c=-12$

(v) $a=1, b=-4, c=-13$

10. Find a and b in order that $(x^3+10x^2) + (ax+b)$ may be exactly divisible by $(x^2+5x-24)$

(i) $a=3, b=-118$ (ii) $a=0, b=-121$ (iii) $a=2, b=-119$ (iv) $a=1, b=-120$ (v) $a=-1, b=-122$

11. Find the quadratic equation with roots $(\frac{9}{8}, \frac{9}{8})$

(i) $(64x^2-128x+63)=0$ (ii) $(64x^2-144x+81)=0$ (iii) $(16x^2-42x+27)=0$ (iv) $(64x^2-160x+99)=0$

(v) $(80x^2-162x+81)=0$

Assignment Key

1) (v)	2) (iii)	3) (v)	4) (v)	5) (iii)	6) (iii)
7) (ii)	8) (i)	9) (ii)	10) (iv)	11) (ii)	