EduSahara™ Assignment

Name : Solution of a Quadratic Equation Complex Problems

Chapter : Quadratic Equations

Grade : SSC Grade X

1. Solve : $\frac{(x+9)}{(4x+3)}=\frac{(x-7)}{(x+2)}$

(i) $(1,-13)$ (ii) $(-4,11)$ (iii) $(-2,12)$ (iv) $(-1,13)$ (v) $(2,15)$

2. Solve : $\frac{(x+2)}{(x-6)}+\frac{(x-4)}{(x-8)}=\frac{74}{15}$

(i) $(\frac{92}{13},12)$ (ii) $(\frac{76}{11},9)$ (iii) $(\frac{80}{11},13)$ (iv) $(\frac{64}{9},10)$ (v) $(\frac{78}{11},11)$

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

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

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

4. Solve : $(x^4-6x^2+5)=0$

(i) $5,(-5),0,(-2)$ (ii) $\sqrt{2},(-\sqrt{2}),(-1),(-3)$ (iii) $\sqrt{5},(-\sqrt{5}),1,(-1)$ (iv) $\sqrt{7},(-\sqrt{8}),4,2$

(v) $\sqrt[4]{5},(-\sqrt[4]{5}),2,0$

5. Solve : $(x-4)(x-3)(x-2)(x-1)=1680$

(i) $10,(-3)$ (ii) $6,(-6)$ (iii) $9,(-4)$ (iv) $8,(-5)$ (v) $11,(-2)$

6. Solve the quadratic equation $x+\frac{30}{x}=-11$

(i) $(-4,-6)$ (ii) $(-2,-7)$ (iii) $(-2,-9)$ (iv) $(-5,-6)$ (v) $(-4,-7)$

7. For what values of k are the roots of $(k-9)x^2+(k+6)x+(k-2)=0$ equal

(i) $(\frac{4}{3},15)$ (ii) $(\frac{4}{3},17)$ (iii) $(\frac{2}{5},18)$ (iv) $(\frac{2}{5},17)$ (v) $(\frac{2}{3},18)$

8. Solve : $\left(\frac{x}{(x+5)}\right)^2+5\left(\frac{x}{(x+5)}\right)+4=0$

(i) $(\frac{-3}{2}),-1$ (ii) $-3,-5$ (iii) $(\frac{-7}{2}),-6$ (iv) $(\frac{-9}{4}),-3$ (v) $(\frac{-5}{2}),-4$

9. Solve : $\sqrt{(3x+4)} = (x-5)$

(i) $(\frac{13}{2}+\frac{1}{2}\sqrt{170}),(\frac{13}{2}-\frac{1}{2}\sqrt{170})$ (ii) $(\frac{13}{2}\sqrt{5}+\frac{1}{2}\sqrt{85}),(\frac{13}{2}\sqrt{5}-\frac{1}{2}\sqrt{85})$ (iii) $(\frac{13}{2}+\frac{1}{2}\sqrt{85}),(\frac{13}{2}-\frac{1}{2}\sqrt{85})$

(iv) $(\frac{13}{2}\sqrt{4}+\frac{1}{2}\sqrt{85}),(\frac{13}{2}\sqrt{4}-\frac{1}{2}\sqrt{85})$ (v) $(\frac{13}{2}+\frac{1}{2}\sqrt{255}),(\frac{13}{2}-\frac{1}{2}\sqrt{255})$

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10. Solve : $\sqrt{(-x^2-3x+10)} = (x+5)$

(i) $(-\frac{3}{2}\sqrt{5}),(-5\sqrt{5})$ (ii) $(-\frac{3}{2}),(-5)$ (iii) $(-\frac{3}{2}\sqrt{3}),(-5\sqrt{3})$ (iv) $(-\frac{3}{2}\sqrt{4}),(-5\sqrt{4})$ (v) $(-\frac{3}{2}\sqrt{2}),(-5\sqrt{2})$

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11. Solve : $\frac{1}{(x-3)} + \frac{5}{(-x+2)} = 5$

(i) $3\sqrt{2},2\sqrt{2}$ (ii) $3,2$ (iii) $3\sqrt{5},2\sqrt{5}$ (iv) $3\sqrt{3},2\sqrt{3}$ (v) $3\sqrt{4},2\sqrt{4}$

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12. Solve : $\frac{1}{(x-1)} + \frac{5}{(x-2)} = \frac{3}{(x-3)}$

(i) $(\frac{8}{3}+\frac{1}{3}\sqrt{38}),(\frac{8}{3}-\frac{1}{3}\sqrt{38})$ (ii) $(\frac{8}{3}\sqrt{4}+\frac{1}{3}\sqrt{19}),(\frac{8}{3}\sqrt{4}-\frac{1}{3}\sqrt{19})$ (iii) $(\frac{8}{3}+\frac{1}{3}\sqrt{57}),(\frac{8}{3}-\frac{1}{3}\sqrt{57})$

(iv) $(\frac{8}{3}+\frac{1}{3}\sqrt{19}),(\frac{8}{3}-\frac{1}{3}\sqrt{19})$ (v) $(\frac{8}{3}\sqrt{5}+\frac{1}{3}\sqrt{19}),(\frac{8}{3}\sqrt{5}-\frac{1}{3}\sqrt{19})$

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13. Solve : $-\ 3\sqrt{11}x^2 + 16x + 9\sqrt{11} = 0$

(i) $\frac{\sqrt{11}}{(-3)},\frac{9}{\sqrt{44}}$ (ii) $\frac{\sqrt{11}}{(-3\sqrt{4})},\frac{9}{\sqrt{44}}$ (iii) $\frac{\sqrt{44}}{(-3)},\frac{9}{\sqrt{11}}$ (iv) $\frac{\sqrt{11}}{(-3)},\frac{9}{\sqrt{11}}$ (v) $\frac{\sqrt{44}}{(-3)},\frac{9\sqrt{4}}{\sqrt{11}}$

Assignment Key

1) (iv)	2) (v)	3) (ii)	4) (iii)	5) (iii)	6) (iv)
7) (v)	8) (v)	9) (iii)	10) (ii)	11) (ii)	12) (iv)
13) (iv)					