EduSahara™ Assignment

Name : Solution of a Quadratic Equation Complex Problems

Chapter : Quadratic Equations

Grade : SSC Grade X

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1. Solve : $\frac{(21x+2)}{(30x+1)}=\frac{(3x+1)}{(4x+2)}$

(i) $((\frac{-1}{2}),0)$ (ii) $((\frac{-1}{6}),3)$ (iii) $((\frac{-1}{4}),2)$ (iv) $(\frac{1}{6},6)$ (v) $(\frac{1}{6},-3)$

2. Solve : $\frac{(x-4)}{(x-5)}+\frac{(x-2)}{(x+6)}=\frac{49}{26}$

(i) $(54,6)$ (ii) $(\frac{262}{5},8)$ (iii) $(52,4)$ (iv) $(\frac{158}{3},7)$ (v) $(\frac{160}{3},9)$

3. Solve : $(x^2-3x)^2 - 8(x^2-3x) + 12=0$

(i) $(\frac{3}{2}+\frac{1}{2}\sqrt[4]{33}),(\frac{3}{2}-\frac{1}{2}\sqrt[4]{33}),(\frac{3}{2}+\frac{1}{2}\sqrt[4]{17}),(\frac{3}{2}-\frac{1}{2}\sqrt[4]{17})$

(ii) $(\frac{3}{2}+\frac{1}{2}\sqrt{33}),(\frac{3}{2}-\frac{1}{2}\sqrt{33}),(\frac{3}{2}+\frac{1}{2}\sqrt{17}),(\frac{3}{2}-\frac{1}{2}\sqrt{17})$

(iii) $(\frac{1}{2}+\frac{1}{2}\sqrt{33}),(\frac{1}{2}-\frac{1}{2}\sqrt{33}),(\frac{1}{2}+\frac{1}{2}\sqrt{17}),(\frac{1}{2}-\frac{1}{2}\sqrt{17})$ (iv) $(\frac{3}{2}+\frac{33}{2}),(\frac{3}{2}-\frac{33}{2}),(\frac{3}{2}+\frac{17}{2}),(\frac{3}{2}-\frac{17}{2})$

(v) $(\frac{5}{2}+\frac{1}{2}\sqrt{33}),(\frac{5}{2}-\frac{1}{2}\sqrt{33}),(\frac{5}{2}+\frac{1}{2}\sqrt{17}),(\frac{5}{2}-\frac{1}{2}\sqrt{17})$

4. Solve : $(x^4-10x^2+16)=0$

(i) $2\sqrt{\frac{1}{2}},(-2\sqrt{\frac{1}{2}}),\sqrt{-1},(-\sqrt{\frac{1}{2}})$ (ii) $4,(-4),2,(-2)$ (iii) $2\sqrt{5},(-2\sqrt{4}),\sqrt{4},(-\sqrt{5})$ (iv) $2\sqrt[4]{2},(-2\sqrt[4]{2}),\sqrt[4]{2},(-\sqrt[4]{2})$

(v) $2\sqrt{2},(-2\sqrt{2}),\sqrt{2},(-\sqrt{2})$

5. Solve : $(x-5)(x-4)(x-3)(x-2)=11880$

(i) $17,(-4)$ (ii) $14,(-7)$ (iii) $11,(-9)$ (iv) $15,(-6)$ (v) $13,(-8)$

6. Solve the quadratic equation $x - 2=\frac{8}{x}$

(i) $(5,-2)$ (ii) $(4,-2)$ (iii) $(5,-3)$ (iv) $(7,-4)$ (v) $(7,-3)$

7. For what values of k are the roots of $(k-10)x^2 + (k+14)x + (k-1)=0$ equal

(i) $(1,25)$ (ii) $(1,23)$ (iii) $((-1),25)$ (iv) $((-2),26)$ (v) $((-1),26)$

8. Solve : $\left(\frac{x}{(x-5)}\right)^2+3\left(\frac{x}{(x-5)}\right)-54=0$

(i) $5,5$ (ii) $7,\frac{17}{4}$ (iii) $4,\frac{7}{2}$ (iv) $8,\frac{11}{2}$ (v) $6,\frac{9}{2}$

9. Solve : $\sqrt{(x+2)}=(x-1)$

(i) $(\frac{3}{2}\sqrt{4}+\frac{1}{2}\sqrt{13}),(\frac{3}{2}\sqrt{4}-\frac{1}{2}\sqrt{13})$ (ii) $(\frac{3}{2}+\frac{1}{2}\sqrt{13}),(\frac{3}{2}-\frac{1}{2}\sqrt{13})$ (iii) $(\frac{3}{2}+\frac{1}{2}\sqrt{39}),(\frac{3}{2}-\frac{1}{2}\sqrt{39})$

(iv) $(\frac{3}{2}\sqrt{5}+\frac{1}{2}\sqrt{13}),(\frac{3}{2}\sqrt{5}-\frac{1}{2}\sqrt{13})$ (v) $(\frac{3}{2}+\frac{1}{2}\sqrt{26}),(\frac{3}{2}-\frac{1}{2}\sqrt{26})$

10. Solve : $\sqrt{(2x^2+6x-8)}=x$

(i) $(-3\sqrt{5}-\sqrt{17}),(-3\sqrt{5}+\sqrt{17})$ (ii) $(-3-\sqrt{34}),(-3+\sqrt{34})$ (iii) $(-3-\sqrt{51}),(-3+\sqrt{51})$

(iv) $(-3\sqrt{4}-\sqrt{17}),(-3\sqrt{4}+\sqrt{17})$ (v) $(-3-\sqrt{17}),(-3+\sqrt{17})$

11. Solve : $-\frac{4}{(x+2)}+\frac{4}{(-x+5)}=-5$

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

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

(i) $(-\frac{23}{12}+\frac{1}{12}\sqrt{1202}),(-\frac{23}{12}-\frac{1}{12}\sqrt{1202})$ (ii) $(-\frac{23}{12}\sqrt{5}+\frac{1}{12}\sqrt{601}),(-\frac{23}{12}\sqrt{5}-\frac{1}{12}\sqrt{601})$

(iii) $(-\frac{23}{12}+\frac{1}{12}\sqrt{601}),(-\frac{23}{12}-\frac{1}{12}\sqrt{601})$ (iv) $(-\frac{23}{12}+\frac{1}{12}\sqrt{1803}),(-\frac{23}{12}-\frac{1}{12}\sqrt{1803})$

(v) $(-\frac{23}{12}\sqrt{4}+\frac{1}{12}\sqrt{601}),(-\frac{23}{12}\sqrt{4}-\frac{1}{12}\sqrt{601})$

13. Solve : $-6\sqrt{7}x^2+11x+3\sqrt{7}=0$

(i) $\frac{\sqrt{28}}{(-6)},\frac{3}{\sqrt{7}}$ (ii) $\frac{\sqrt{7}}{(-6)},\frac{3}{\sqrt{28}}$ (iii) $\frac{\sqrt{28}}{(-6)},\frac{3\sqrt{4}}{\sqrt{7}}$ (iv) $\frac{\sqrt{7}}{(-6)},\frac{3}{\sqrt{7}}$ (v) $\frac{\sqrt{7}}{(-6\sqrt{4})},\frac{3}{\sqrt{28}}$

Assignment Key

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

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