EduSahara™ Assignment

Name : Solution of a Quadratic Equation Complex Problems

Chapter : Quadratic Equations

Grade : SSC Grade X

1. Solve : $\frac{(x-5)}{(x+10)}=\frac{(x-1)}{(3x+2)}$

   (i) $(-11,0)$ (ii) $(8,-3)$ (iii) $(10,-1)$ (iv) $(11,0)$ (v) $(13,2)$

2. Solve : $\frac{(x+2)}{(4x+1)}+\frac{(3x+2)}{(x-1)}=\frac{153}{26}$

   (i) $(\frac{-49}{274},6)$ (ii) $(\frac{-53}{274},1)$ (iii) $(\frac{-3}{16},2)$ (iv) $(\frac{-17}{92},4)$ (v) $(\frac{-51}{274},3)$

3. Solve : $(x^2-4x)^2-9(x^2-4x)+8=0$

   (i) $(-1+2\sqrt{3}),(0-2\sqrt{3}),(-1+\sqrt{5}),(0-\sqrt{5})$ (ii) $(2+2\sqrt{3}),(2-2\sqrt{3}),(2+\sqrt{5}),(2-\sqrt{5})$

   (iii) $(2+2\sqrt[4]{3}),(2-2\sqrt[4]{3}),(2+\sqrt[4]{5}),(2-\sqrt[4]{5})$ (iv) $(4+2\sqrt{3}),(4-2\sqrt{3}),(4+\sqrt{5}),(4-\sqrt{5})$

   (v) $(2+6),(2-6),(2+5),(2-5)$

4. Solve : $(x^4-13x^2+42)=0$

   (i) $7,(-7),6,(-6)$ (ii) $\sqrt{10},(-\sqrt{10}),\sqrt{9},(-\sqrt{8})$ (iii) $\sqrt{5},(-\sqrt{4}),\sqrt{3},(-\sqrt{3})$ (iv) $\sqrt{7},(-\sqrt{7}),\sqrt{6},(-\sqrt{6})$

   (v) $\sqrt[4]{7},(-\sqrt[4]{7}),\sqrt[4]{6},(-\sqrt[4]{6})$

5. Solve : $(x-2)(x-1)x(x+1)=17160$

   (i) $9,(-14)$ (ii) $11,(-12)$ (iii) $12,(-11)$ (iv) $14,(-9)$ (v) $13,(-10)$

6. Solve the quadratic equation $x-9=-\frac{20}{x}$

   (i) $(6,3)$ (ii) $(8,3)$ (iii) $(5,4)$ (iv) $(6,4)$ (v) $(8,1)$

7. For what values of k are the roots of $(k-15)x^2+(k+45)x+(k+13)=0$ equal

   (i) $(-\frac{55}{3},51)$ (ii) $(-\frac{53}{3},50)$ (iii) $(-\frac{91}{5},51)$ (iv) $(-\frac{53}{3},49)$ (v) $(-\frac{91}{5},50)$

8. Solve : $\left(\frac{x}{(x+2)}\right)^2 - 13\left(\frac{x}{(x+2)}\right) + 40 = 0$

(i) $\left(\frac{-18}{7}\right), \left(\frac{-7}{2}\right)$ (ii) $\left(\frac{-16}{7}\right), \left(\frac{-5}{2}\right)$ (iii) $\left(\frac{-20}{9}\right), \left(\frac{-9}{4}\right)$ (iv) $-2, \left(\frac{-3}{2}\right)$ (v) $\left(\frac{-12}{5}\right), -3$

---

9. Solve : $\sqrt{(4x-8)} = (x-1)$

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

---

10. Solve : $\sqrt{(5x^2-24x+27)} = (x+7)$

(i) $\left(\frac{19}{4}\sqrt{5} - \frac{1}{4}\sqrt{449}\right), \left(\frac{19}{4}\sqrt{5} + \frac{1}{4}\sqrt{449}\right)$ (ii) $\left(\frac{19}{4}\sqrt{4} - \frac{1}{4}\sqrt{449}\right), \left(\frac{19}{4}\sqrt{4} + \frac{1}{4}\sqrt{449}\right)$

(iii) $\left(\frac{19}{4} - \frac{1}{4}\sqrt{1347}\right), \left(\frac{19}{4} + \frac{1}{4}\sqrt{1347}\right)$ (iv) $\left(\frac{19}{4} - \frac{1}{4}\sqrt{898}\right), \left(\frac{19}{4} + \frac{1}{4}\sqrt{898}\right)$ (v) $\left(\frac{19}{4} - \frac{1}{4}\sqrt{449}\right), \left(\frac{19}{4} + \frac{1}{4}\sqrt{449}\right)$

---

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

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

---

12. Solve : $-\frac{4}{(x-3)} + \frac{4}{(-x-5)} = \frac{4}{(x-2)}$

(i) $\frac{1}{3}\sqrt{285}, \left(-\frac{1}{3}\sqrt{285}\right)$ (ii) $\frac{1}{3}\sqrt{171}, \left(-\frac{1}{3}\sqrt{171}\right)$ (iii) $\frac{1}{3}\sqrt{57}, \left(-\frac{1}{3}\sqrt{57}\right)$ (iv) $\frac{1}{3}\sqrt{114}, \left(-\frac{1}{3}\sqrt{114}\right)$

(v) $\frac{1}{3}\sqrt{228}, \left(-\frac{1}{3}\sqrt{228}\right)$

---

13. Solve : $-5\sqrt{2}x^2 + 28x + 6\sqrt{2} = 0$

(i) $\frac{\sqrt{2}}{(-5)}, \frac{6}{\sqrt{8}}$ (ii) $\frac{\sqrt{2}}{(-5)}, \frac{6}{\sqrt{2}}$ (iii) $\frac{\sqrt{8}}{(-5)}, \frac{6}{\sqrt{2}}$ (iv) $\frac{\sqrt{2}}{(-5\sqrt{4})}, \frac{6}{\sqrt{8}}$ (v) $\frac{\sqrt{8}}{(-5)}, \frac{6\sqrt{4}}{\sqrt{2}}$

Assignment Key

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