EduSahara™ Worksheet

Name : Chapter Based Worksheet

Chapter : Quadratic Equations

Grade : ICSE Grade VIII

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

(i) $(-\frac{29}{8}+\frac{5}{8}\sqrt{258}),(-\frac{29}{8}-\frac{5}{8}\sqrt{258})$ (ii) $(-\frac{29}{8}+\frac{5}{8}\sqrt{129}),(-\frac{29}{8}-\frac{5}{8}\sqrt{129})$

(iii) $(-\frac{29}{8}+\frac{5}{8}\sqrt{387}),(-\frac{29}{8}-\frac{5}{8}\sqrt{387})$ (iv) $(-\frac{29}{8}\sqrt{5}+\frac{5}{8}\sqrt{129}),(-\frac{29}{8}\sqrt{5}-\frac{5}{8}\sqrt{129})$

(v) $(-\frac{29}{8}\sqrt{4}+\frac{5}{8}\sqrt{129}),(-\frac{29}{8}\sqrt{4}-\frac{5}{8}\sqrt{129})$

2. Find the roots of the quadratic equation $(x^2+15x+54)=0$

(i) (-3,-10) (ii) (-3,-12) (iii) (-5,-9) (iv) (-6,-9) (v) (-5,-10)

3. Solve : $14x^2-abx-3a^2b^2=0$

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

4. Find the roots of the quadratic equation $(35x^2-33x+4)=0$

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

5. Find the roots of the quadratic equation $(x^2-13x+40)=0$

(i) (11,4) (ii) (8,5) (iii) (9,5) (iv) (9,4) (v) (11,2)

6. Solve : $\frac{1}{(x+5)}-\frac{5}{(x-2)}=\frac{4}{(x-4)}$

(i) $(-\frac{23}{16}\sqrt{5}-\frac{9}{16}\sqrt{65}),(-\frac{23}{16}\sqrt{5}+\frac{9}{16}\sqrt{65})$ (ii) $(-\frac{23}{16}-\frac{9}{16}\sqrt{195}),(-\frac{23}{16}+\frac{9}{16}\sqrt{195})$

(iii) $(-\frac{23}{16}-\frac{9}{16}\sqrt{130}),(-\frac{23}{16}+\frac{9}{16}\sqrt{130})$ (iv) $(-\frac{23}{16}\sqrt{4}-\frac{9}{16}\sqrt{65}),(-\frac{23}{16}\sqrt{4}+\frac{9}{16}\sqrt{65})$

(v) $(-\frac{23}{16}-\frac{9}{16}\sqrt{65}),(-\frac{23}{16}+\frac{9}{16}\sqrt{65})$

7. Find the roots of the quadratic equation $(28x^2+28x)=0$

(i) $(2,-2)$ (ii) $(0,-1)$ (iii) $(2,-3)$ (iv) $(1,-1)$ (v) $(1,-2)$

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

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

9. Find the discriminant of the quadratic equation $(x^2-x-12)=0$

(i) 49 (ii) 50 (iii) 48 (iv) 52 (v) 47

10. Solve : $\frac{(7x+6)}{(2x+1)}=\frac{(20x+3)}{(5x+4)}$

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

11. Find the roots of the quadratic equation $(x^2+10x+24)=0$

(i) (-2,-8) (ii) (-4,-6) (iii) (-2,-7) (iv) (-3,-7) (v) (-3,-6)

12. Find the roots of the quadratic equation $(16x^2-42x+5)=0$

(i) $(\frac{7}{2},\frac{1}{6})$ (ii) $(\frac{7}{2},(\frac{-1}{8}))$ (iii) $(\frac{9}{4},\frac{1}{6})$ (iv) $(\frac{5}{2},\frac{1}{8})$ (v) $(\frac{9}{4},\frac{1}{8})$

13. Solve : $\frac{(x+3)}{(3x+5)}=\frac{(2x+1)}{(5x+4)}$

(i) (1,-7) (ii) (-4,4) (iii) (-2,6) (iv) (2,9) (v) (-1,7)

14. Find the roots of the quadratic equation $(30x^2-35x+5)=0$

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

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

(i) $(\frac{43}{8}+\frac{1}{8}\sqrt{498}),(\frac{43}{8}-\frac{1}{8}\sqrt{498})$ (ii) $(\frac{43}{8}\sqrt{4}+\frac{1}{8}\sqrt{249}),(\frac{43}{8}\sqrt{4}-\frac{1}{8}\sqrt{249})$

(iii) $(\frac{43}{8}\sqrt{5}+\frac{1}{8}\sqrt{249}),(\frac{43}{8}\sqrt{5}-\frac{1}{8}\sqrt{249})$ (iv) $(\frac{43}{8}+\frac{1}{8}\sqrt{747}),(\frac{43}{8}-\frac{1}{8}\sqrt{747})$

(v) $(\frac{43}{8}+\frac{1}{8}\sqrt{249}),(\frac{43}{8}-\frac{1}{8}\sqrt{249})$

16. Find the discriminant of the quadratic equation $(x^2+5x)=0$

(i) 25 (ii) 28 (iii) 23 (iv) 24 (v) 26

17. Solve : $28x^2 - 3abx - a^2b^2 = 0$

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

18. Solve : $\frac{(x-8)}{(x-4)} + \frac{(x+2)}{(x-6)} = \frac{106}{35}$

(i) $(\frac{30}{11}, 12)$ (ii) $(\frac{22}{7}, 10)$ (iii) $(\frac{28}{9}, 14)$ (iv) $(\frac{26}{9}, 11)$ (v) $(\frac{8}{3}, 9)$

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

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

20. Find the roots of the quadratic equation $(x^2-11x+28)=0$

(i) $(8,4)$ (ii) $(9,3)$ (iii) $(8,3)$ (iv) $(9,1)$ (v) $(7,4)$

21. Solve : $\frac{(2x+1)}{(x+1)} + \frac{(5x+1)}{(6x+1)} = \frac{98}{39}$

(i) $(-1, (\frac{-4}{15}))$ (ii) $(2, (\frac{-2}{15}))$ (iii) $(4, 0)$ (iv) $(3, (\frac{-2}{17}))$ (v) $(1, (\frac{-2}{13}))$

22. Find the roots of the quadratic equation $(20x^2+13x+2)=0$

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

23. Solve the quadratic equation $x - 14 = -\frac{48}{x}$

(i) $(9,5)$ (ii) $(9,6)$ (iii) $(11,5)$ (iv) $(8,6)$ (v) $(11,4)$

24. Solve the quadratic equation $x + 2 = \frac{15}{x}$

(i) $(4,-5)$ (ii) $(5,-6)$ (iii) $(3,-5)$ (iv) $(4,-6)$ (v) $(5,-7)$

25. Solve : $\frac{(x+3)}{(3x+1)} = \frac{(9x+2)}{(20x+3)}$

(i) $(\frac{-3}{7}, 4)$ (ii) $(\frac{1}{7}, -7)$ (iii) $(\frac{-1}{5}, 6)$ (iv) $(\frac{1}{7}, 10)$ (v) $(\frac{-1}{7}, 7)$

Assignment Key

1) (ii)	2) (iv)	3) (ii)	4) (iv)	5) (ii)	6) (v)
7) (ii)	8) (i)	9) (i)	10) (ii)	11) (ii)	12) (iv)
13) (v)	14) (iv)	15) (v)	16) (i)	17) (i)	18) (iv)
19) (iii)	20) (v)	21) (ii)	22) (i)	23) (iv)	24) (iii)
25) (v)					