Quadratic Equations

EQUATION REDUCIBLE TO QUADRATIC EQUATION

EXERCISE

Equation Reducible to Quadratic Equation

Ex. 1 Solve: $x^6-9x^3+8=0$

Ex. 2 Solve for $x: 5x-\frac{35}{x}=18, x\neq 0$

Ex. 3 Solve for $z: 3^{z+2}+3^{-2}=10$

Ex. 4 Solve: $\sqrt{(x^2+5x+1)}-1=2x$

Ex. 5 Determine the roots of the cubic equation $2x^3+3x^2-11x-6=0$ by reducing it to the factor of a quadratic equation.

Ex. 6 Solve : $x^{\frac{2}{3}}=7x^{\frac{1}{3}}-12$

Ex. 7 Solve : $\left(\frac{x}{x-1}\right)^2-3\left(\frac{x}{x-1}\right)-18=0, (x\neq 1)$

Ex. 8 Solve : $\left(\frac{3x-1}{2x+3}\right)^4-5\left(\frac{3x-1}{2x+3}\right)^2=-4$

Ex. 9 Solve : $6x+2=7\sqrt{x}$

Ex. 10 Solve : $3x+\frac{3}{x}=10$

ANSWER KEY

1. (1,2)

2. $\left(\frac{-7}{5},5\right)$

3. (-2,0)

4. x=0, x=$\frac{1}{3}$

5. X = 2 , $x=-\frac{1}{2}$ and x = -3

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7. $\left\{\frac{3}{4},\frac{6}{5}\right\}$

8. $\left\{4,\frac{-2}{5},-7,\frac{-5}{7}\right\}$

9. $\left\{\frac{1}{4},\frac{4}{9}\right\}$

10. $\left\{\frac{1}{3},3\right\}$