QUADRATIC EQUATION

EXERCISE

SOLUTION OF QUADRATIC EQUATION BY COMPLETIONG THE SQUARE

Find the roots (if they exist) of the following quadratic equations by the method of

completing the square : (Q.1 to Q.7)

Q1. $x^2 - 2\sqrt{5}x + 1 = 0$

Q2. $4x^2 + x - 5 = 0$

Q3. $9x^2 + x + 15 = 0$

Q4. $x^2 - 5x + 7 = 0$

Q5. $x^2 + 4x - 9 = 0$

Q6. $2x^2 - 5x + 3 = 0$

Q7. $5x^2 - 6x - 2 = 0$

Q8. Solve by completion of square method : $2x^2 + 4x - 8 = 0$.

ANSWER

1. $\sqrt{5} + 2$, $\sqrt{5} - 2$

2. $1, -\dfrac{5}{4}$

3. no real root.

4. $\dfrac{5+\sqrt{7}}{2}, \dfrac{5-\sqrt{7}}{2}$

5. $1, 5$

6. $1, \dfrac{3}{2}$

7. $\dfrac{3+\sqrt{19}}{5}, \dfrac{3-\sqrt{19}}{5}$

8. $x = \sqrt{5} - 1$ or $-\sqrt{5} - 1$