Solving Quadratic Equations by Completing the Square

MATH MONKS

1. $x^2 + 12x + 32 = 0$

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2. $x^2 + 8x + 2 = 22$

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3. $2x^2 = 12x + 54$

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4. $x^2 + 8x - 10 = 0$

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

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6. $x^2 - 4x - 91 = 7$

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7. $4x^2 - 4x + 17 = 0$

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8. $3x^2 - 18x - 12 = 0$

Solving Quadratic Equations by Completing the Square

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Answers

1. $x^2 + 12x + 32 = 0$

$(-4, -8)$

2. $x^2 + 8x + 2 = 22$

$(2, -10)$

3. $2x^2 = 12x + 54$

$(9, -3)$

4. $x^2 + 8x - 10 = 0$

$(-4 + \sqrt{26}, -4 - \sqrt{26})$

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

$\left(\frac{1 + \sqrt{37}}{6}, \frac{1 - \sqrt{37}}{6}\right)$

6. $x^2 - 4x - 91 = 7$

$(2 + \sqrt{102}, 2 - \sqrt{102})$

7. $4x^2 - 4x + 17 = 0$

$\left(\frac{1}{2} + 2i, \frac{1}{2} - 2i\right)$

8. $3x^2 - 18x - 12 = 0$

$(3 + \sqrt{13}, 3 - \sqrt{13})$