

Completing the Square 2

1) $x^2 + 18x + \underline{\hspace{2cm}}$

1) $\underline{\hspace{2cm}}$

2) $x^2 - 4x + \underline{\hspace{2cm}}$

2) $\underline{\hspace{2cm}}$

3) $x^2 + \frac{1}{3}x + \underline{\hspace{2cm}}$

3) $\underline{\hspace{2cm}}$

4) $x^2 + 5x + \underline{\hspace{1cm}}$

4) $\underline{\hspace{2cm}}$

5) $x^2 + 9x + \underline{\hspace{1cm}}$

5) $\underline{\hspace{2cm}}$

6) $x^2 - \frac{2}{9}x + \underline{\hspace{1cm}}$

6) $\underline{\hspace{2cm}}$

Solve the equation by completing the square.

7) $x^2 + 14x + 39 = 0$

7) $\underline{\hspace{2cm}}$

8) $x^2 + 18x = -58$

8) $\underline{\hspace{2cm}}$

9) $6x^2 + 10x = -1$

9) $\underline{\hspace{2cm}}$

10) $4x^2 - 3x + 1 = 0$

10) $\underline{\hspace{2cm}}$

11) $8x^2 - 3x + 1 = 0$

11) $\underline{\hspace{2cm}}$

12) $5x^2 + 7x + 3 = 0$

12) $\underline{\hspace{2cm}}$

Answer Key

Testname: CTS

1) $x^2 + 18x + 81 = (x + 9)^2$

2) $x^2 - 4x + 4 = (x - 2)^2$

3) $x^2 + \frac{1}{3}x + \frac{1}{36} = \left(x + \frac{1}{6}\right)^2$

4) $\frac{25}{4}$

5) $\frac{81}{4}$

6) $\frac{1}{81}$

7) $-7 - \sqrt{10}, -7 + \sqrt{10}$

8) $-9 - \sqrt{23}, -9 + \sqrt{23}$

9) $\frac{-5 \pm \sqrt{19}}{6}$

10) $\frac{3 - i\sqrt{7}}{8}, \frac{3 + i\sqrt{7}}{8}$

11) $\frac{3 - i\sqrt{23}}{16}, \frac{3 + i\sqrt{23}}{16}$

12) no real-number solutions