

Foundations of Math 11

Standard \rightarrow Vertex Form \cdot Completing the square

Change from General Form to Standard Form. State Vertex, range, axis of symmetry.

1) $y = x^2 + 4x - 2$

2) $y = x^2 - 18x + 91$

3) $y = -x^2 + 6x - 7$

4) $y = -2x^2 - 36x - 167$

5) $y = -3x^2 - 60x - 305$

6) $y = 3x^2 + 12x + 10$

7) $y = -\frac{2}{5}x^2 - \frac{16}{5}x - \frac{32}{5}$

8) $y = -\frac{1}{4}x^2 - 3x - 18$

9) $y = -2x^2 + 2$

10) $y = 15x^2 - 180x + 538$

11) $y = x^2 + 6x + 1$

12) $y = -2x^2 + 36x - 168$

Solutions ...

1) $y = (x+2)^2 - 6$

2) $y = (x-9)^2 + 10$

3) $y = -(x-3)^2 + 2$

4) $y = -2(x+9)^2 - 5$

5) $y = -3(x+10)^2 - 5$

6) $y = 3(x+2)^2 - 2$

7) $y = -\frac{5}{2}(x+4)^2$

8) $y = -\frac{2}{5}(6+x)^2 - 9$

9) $y = 15(x-6)^2 - 2$

10) $y = (x+2)^2 - 2$

11) $y = (x+3)^2 - 8$

12) $y = -2(x^2 - 18x + 84) - 168$