

Algebra 3 Assignment # 9

Put in standard form, list vertex, AOS and y-intercept.

(1) $y = x^2 - \frac{1}{2}x + 1$

(2) $y = -3x^2 - 6x + 5$

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

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

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

Solve for x:

(6) $x^2 - 5x + 6 = 0$

(7) $x^2 - 10x = 0$

(8) $10x^2 - 13x - 3 = 0$

(9) $x^2 - 4x + 1 = 0$

(10) $2x^2 - 2x = 15$

Answers;

1. $y = \left(x - \frac{1}{4}\right)^2 + \frac{15}{16}$; Vertex $\left(\frac{1}{4}, \frac{15}{16}\right)$ AOS $x = 1/4$; y-int $(0, 1)$

2. $y = -3(x+1)^2 + 8$; Vertex $(-1, 8)$ AOS $x = -1$; y-int $(0, 5)$

3. $y = (x+1)^2 - 2$; Vertex $(-1, -2)$ AOS $x = -1$; y-int $(0, -1)$

4. $y = -(x-2)^2 + 3$; Vertex $(2, 3)$ AOS $x = 2$; y-int $(0, -1)$

5. $y = 3(x+1)^2 - 6$; Vertex $(-1, -6)$ AOS $x = -1$; y-int $(0, -3)$

6. $x = 2, 3$

7. $x = 0, 10$

8. $x = -1/5, 3/2$

9. $x = 2 \pm \sqrt{3}$

10. $\frac{1 \pm \sqrt{31}}{2}$