

A.REI.B.4: Solving Quadratics 6

1 What is the solution set of the equation $x^2 + 9 = 0$?

- 1) $\{3, -3\}$
- 2) $\{3i, -3i\}$
- 3) $\{-3, -3i\}$
- 4) $\{\}$

2 The solution to the equation $4x^2 + 98 = 0$ is

- 1) ± 7
- 2) $\pm 7i$
- 3) $\pm \frac{7\sqrt{2}}{2}$
- 4) $\pm \frac{7i\sqrt{2}}{2}$

3 Express, in terms of i , the roots of the equation

$$\frac{2}{3}x^2 + 18 = 0$$

A.REI.B.4: Solving Quadratics 6**Answer Section**

1 ANS: 2

REF: 080234siii

2 ANS: 4

$$4x^2 = -98$$

$$x^2 = -\frac{98}{4}$$

$$x^2 = -\frac{49}{2}$$

$$x = \pm \sqrt{-\frac{49}{2}} = \pm \frac{7i}{\sqrt{2}} \cdot \frac{\sqrt{2}}{\sqrt{2}} = \pm \frac{7i\sqrt{2}}{2}$$

REF: 061707aii

3 ANS:

$$\pm 3i\sqrt{3}$$

REF: 069041siii