

NAME: \_\_\_\_\_

*P.I. A2.A.25: Solve quadratic equations, using the quadratic formula*

1. Determine the complex number solution to the equation.  $x^2 - 2x + 10 = 0$

[A]  $2i$     [B]  $3i$     [C]  $1 + 3i$     [D]  $1 - 2i$

5.  $3x^2 + 28 = 0$

[A]  $x = \frac{\pm 2i\sqrt{7}}{3}$     [B]  $x = \pm 2i\sqrt{7}$

[C]  $x = \frac{\pm 2i\sqrt{21}}{3}$     [D]  $x = \frac{\pm i\sqrt{21}}{14}$

Solve:

2.  $x^2 + 2x + 17 = 0$

[A]  $1 + 8i, 1 - 8i$

[B]  $-1 + 4i, -1 - 4i$

[C]  $1 + 4i, 1 - 4i$

[D]  $-1 + 8i, -1 - 8i$

6.  $-3x + 6 + 5x^2 = 0$

7.  $-x + 4 + 6x^2 = 0$

3.  $x^2 - 4x + 20 = 0$

[A]  $-2 + 8i, -2 - 8i$

[B]  $-2 + 4i, -2 - 4i$

[C]  $2 + 8i, 2 - 8i$     [D]  $2 + 4i, 2 - 4i$

8.  $x^2 + 2x + 5 = 0$

9.  $x^2 - 6x + 25 = 0$

4.  $7x^2 + 50 = 0$

[A]  $x = \frac{\pm i\sqrt{14}}{10}$     [B]  $x = \frac{\pm 5i\sqrt{14}}{7}$

[C]  $x = \frac{\pm 5i\sqrt{2}}{7}$     [D]  $x = \pm 5i\sqrt{2}$

10.  $x^2 + 2x + 10 = 0$

[1] C

[2] B

[3] D

[4] B

[5] C

[6]  $\frac{3 \pm i\sqrt{111}}{10}$

[7]  $\frac{1 \pm i\sqrt{95}}{12}$

[8]  $-1+2i, -1-2i$

[9]  $3+4i, 3-4i$

[10]  $-1+3i, -1-3i$