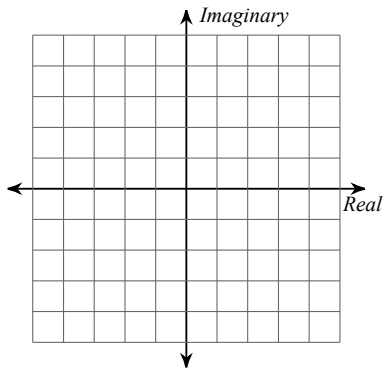


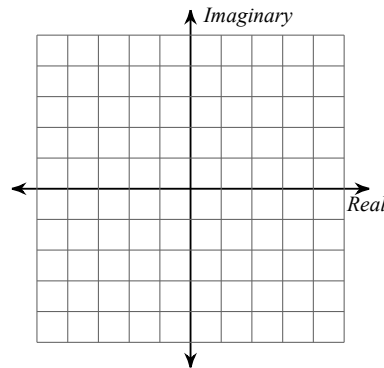
RT6: Complex Numbers, Completing the Square, Quadratic Formula, Discriminant

Graph each number in the complex plane.

1) $-1 + 2i$



2) $-3 + 4i$

**Simplify.**

3) $(1 + 2i) - (-5 + 2i)$

4) $(-7 - 8i) + (-1 - 5i)$

5) $(-8i)(-8 + 6i)$

6) $(-8 + 5i)(4 - 8i)$

Find the value of c that completes the square and then factor the trinomial.

7) $m^2 - 26m + c$

8) $z^2 + 40z + c$

Solve each equation by completing the square.

9) $n^2 + 8n + 44 = 10$

10) $b^2 + 16b + 50 = 2$

Find the discriminant of each quadratic equation then state the number and type of solutions.

11) $n^2 + 4n + 4 = 0$

12) $9r^2 - r - 4 = -8$

13) $n^2 - 7n - 16 = -8$

Solve each equation with the quadratic formula.

14) $4x^2 + 7 = 0$

15) $2m^2 - 3m - 5 = 0$

16) $8n^2 - 16 = 0$