Name: Date:

Instruction: Solve each quadratic equation using the quadratic formula. Show your work.

The Quadratic Formula: $ax^2 + bx + c = 0$, $x = \dfrac{-b \pm \sqrt{b^2 - 4ac}}{2a}$.

1. $\boxed{x = 1 \pm \sqrt{3}}$

2. $\boxed{x = -2 \pm \sqrt{10}}$

3. $\boxed{\text{No Real Solution; } x = 2 \pm 3i}$

4. $\boxed{\text{No Real Solution; } x = -3 \pm 2\sqrt{5}i}$

5. $\boxed{x = \frac{5 \pm 3\sqrt{5}}{2}}$

6. $\boxed{x = \frac{-3 \pm \sqrt{5}}{2}}$

7. $\boxed{x = -\frac{8}{3}, 1}$

8. $\boxed{x = \frac{4 \pm \sqrt{6}}{2}}$

9. $$\begin{aligned} x &= \frac{-(-4) \pm \sqrt{(-4)^2 - 4(3)(-5)}}{2(3)} \\ &= \frac{4 \pm \sqrt{16 + 60}}{6} \\ &= \frac{4 \pm \sqrt{76}}{6} \\ &= \frac{4 \pm 2\sqrt{19}}{6} \\ &= \boxed{\frac{2 \pm \sqrt{19}}{3}} \end{aligned}$$

10. $\boxed{x = -7, -3}$