

1. (7 points) Solve:  $4(4 + 3x) = 5(x - 1)$ . Clearly indicate the steps involved in your solution (or lose points).

$$16 + 12x = 5x - 5$$

$$7x = -21$$

$$x = -3$$

2. (7 points) Solve by factoring:  $x^2 - 25 = 0$ . Clearly indicate the steps involved in your solution (or lose points).

$$(x + 5)(x - 5) = 0$$

$$x = \pm 5$$

3. (7 points) Solve using the quadratic formula:  $x^2 + 5x + 2 = 0$ . Clearly indicate the steps involved in your solution (or lose points).

$$\begin{aligned} x &= \frac{-5 \pm \sqrt{5^2 - 4(1)(2)}}{2(1)} = \frac{-5}{2} \pm \frac{\sqrt{25 - 8}}{2} \\ &= \frac{-5}{2} \pm \frac{\sqrt{17}}{2} \end{aligned}$$