

1. Best method for $x^2 - 9 = 0$?

Difference of squares / roots

Answer: factor or take roots: $x = \pm 3$ **2. Best method for $x^2 + 7x + 12 = 0$?**

Factors nicely

Answer: factor: $x = -3, -4$ **3. Best method for $(x - 5)^2 = 20$?**

Already squared

Answer: take roots: $x = 5 \pm 2\sqrt{5}$ **4. Best method for $2x^2 - 4x - 3 = 0$?**

Won't factor; 'radical form'

Answer: quadratic formula**5. Solve $x^2 - 2x - 15 = 0$ (your choice).**Factors: $(x-5)(x+3)$ **Answer: $x = 5$ or -3** **6. Solve $4x^2 = 25$.** $x^2 = 25/4$; roots**Answer: $x = \pm 5/2$** **7. Solve $x^2 + 8x + 11 = 0$ (simplest radical form).**complete square: $(x+4)^2 = 5$ **Answer: $x = -4 \pm \sqrt{5}$** **8. Solve $3x^2 + 7x + 2 = 0$.**Factors: $(3x + 1)(x + 2)$ **Answer: $x = -1/3$ or -2** **9. A parabola $y = x^2 - 4x + 1$ - find its zeros in simplest radical form, then its axis of symmetry. ★ challenge**formula/CTS: $(x-2)^2 = 3$ zeros $2 \pm \sqrt{3}$; axis = midpoint**Answer: $x = 2 \pm \sqrt{3}$; axis $x = 2$** **10. Solve $x^2 - 6x + 3 = 0$ two ways (formula AND completing the square) and confirm they match. ★ challenge**Formula: $3 \pm \sqrt{6}$ CTS: $(x-3)^2 = 6$ **Answer: $x = 3 \pm \sqrt{6}$ both ways**