1. **What completes x^2 + 6x + ___?**
   Half of 6 is 3; 3^2
   Answer: 9

2. **x^2 + 6x + 9 = ( )^2.**
   Half of 6
   Answer: (x + 3)^2

3. **What completes x^2 - 10x + ___?**
   Half of -10 is -5; 25
   Answer: 25

4. **Solve x^2 + 6x = 7 by completing the square.**
   Add 9: (x + 3)^2 = 16
   x + 3 = +-4
   Answer: x = 1 or -7

5. **Solve x^2 - 4x = 5.**
   Add 4: (x - 2)^2 = 9
   x - 2 = +-3
   Answer: x = 5 or -1

6. **Rewrite x^2 - 6x = 24 in the form (x - h)^2 = k. (Trainer echo - Jan 2026 Q23!)**
   Half of -6 is -3; add 9
   (x - 3)^2 = 33
   Answer: (x - 3)^2 = 33

7. **Rewrite x^2 - 6x = 27 with completing the square. (Trainer echo - June 2025 Q11!)**
   Add 9 to both sides
   Answer: (x - 3)^2 = 36

8. **Solve x^2 + 8x + 5 = 0.**
   Move 5: x^2 + 8x = -5
   Add 16: (x + 4)^2 = 11
   x + 4 = +-sqrt(11)
   Answer: x = -4 +- sqrt(11)

9. **Solve x^2 + 14x - 28 = 0, writing it as (x + p)^2 = q first. (Trainer echo - Aug 2025 Q30!) ★ challenge**
   x^2 + 14x = 28; add 49
   (x + 7)^2 = 77
   Answer: (x + 7)^2 = 77

10. Convert y = x^2 + 4x + 1 to vertex form by completing the square, then state the vertex. ★ challenge

Half of 4 is 2; add & subtract 4

y = (x + 2)^2 - 3

Answer: vertex (-2, -3)