T-3 Review: Alg 1H & CP

Graphing Quadratics in Completed Square Form

Write each function in completed square form. Choose 3 functions to graph: one that opens up, one down, and one that has a leading coefficient other than one. You might need to read and review in your textbook!

1. $y = x^2 - 10x + 27$

2. $y = -x^2 - 6x - 17$

3. $y = 2x^2 + 12x + 11$

4. $y = -x^2 + 8x - 6$

5. $y = x^2 - 4x - 2$

6. $y = 3x^2 - 12x + 18$

7. Mary throws a set of keys to her brother, who is standing on a balcony 25 ft above the ground. Her hand is 5 ft off the ground when she throws the keys upwards with an initial velocity of 48 ft/sec. Will the keys reach her brother? Show work and explain.