

Write the quadratic function in vertex form. Then identify the vertex.

1. $g(x) = x^2 - 8x + 19$

2. $f(x) = x^2 - 4x - 1$

3. $g(x) = x^2 + 12x - 37$

4. $h(x) = x^2 + 20x + 90$

5. $h(x) = x^2 + 2x - 48$

6. $f(x) = x^2 + 6x - 16$

Review:

7. Solve by factoring. $x^2 + 13x + 22 = 0$

8. Solve by using square roots. $4x^2 - 20 = 0$

9. Solve by completing the square. $x^2 - 6x + 10 = 0$

10. Simplify: $(3 + 9i) - (1 - 7i)$