

Name: _____

Date: _____

Calculator in hand! Graph to see the zeros; use a table or store a value to CONFIRM a radical answer. Last two are challenge problems.

1. Graph $f_1(x) = x^2 - 6x + 3$ and find both zeros (decimals).

show your work

2. Your algebra gave $3 \pm \sqrt{6}$. Does $\sqrt{6}$ approx 2.449 match the graph zeros?

show your work

3. Graph $f_1(x) = 2x^2 - 4x - 3$. How many real zeros?

show your work

4. Graph $f_1(x) = x^2 + x + 5$. How many real zeros, and what does that mean?

show your work

5. Use the table (ctrl+T) to check: is $x = 5$ a solution of $x^2 - 3x - 10 = 0$?

show your work

6. Graph $f_1(x) = x^2 - 2x - 4$ and estimate the zeros to one decimal.

show your work

7. Confirm $3 \pm \sqrt{6}$: evaluate $f_1(3 + \sqrt{6})$ on a calculator page. What should you get?

show your work

8. A quadratic's graph crosses at about 1.27 and -4.27. Which exact answer fits: $-1.5 \pm \sqrt{8}$ or $-1.5 \pm \sqrt{2.75}$?

show your work

9. Graph $f_1(x) = x^2 - 4x + 1$. Find the zeros, the minimum, and show the zeros are symmetric about the vertex's x . ★ CHALLENGE

show your work

10. Solve $x^2 - 6x + 7 = 0$ by formula, then CONFIRM on the calculator two ways (graph zeros AND a table value near a root). ★ CHALLENGE

show your work