

Name: _____

Date: _____

Calculator in hand! Use Analyze Graph for zeros, max, and min - and the Quick Cards from Reference & Tools. Last two are challenge

1. Graph $f_1(x) = x^2 - 4x - 5$ and find both zeros.

show your work

2. Same parabola: find the minimum.

show your work

3. Graph $f_1(x) = -x^2 + 6x$. Find the maximum.

show your work

4. How do the zeros of $f_1(x) = x^2 - 4x - 5$ relate to its axis of symmetry?

show your work

5. Graph $f_1(x) = x^2 - 6x + 5$. Read the vertex from Minimum.

show your work

6. $h(t) = -16t^2 + 80t$: graph and find the maximum. (Trainer echo!)

show your work

7. Verify your factoring: does $x^2 - x - 12 = (x - 4)(x + 3)$? Graph both.

show your work

8. Graph $f_1(x) = x^2 - 3$ and $f_2(x) = 2x$. Find both intersections. (Linear-quadratic!)

show your work

9. A quadratic model $f_1(x) = -0.5x^2 + 4x + 10$. Find its max height, the two zeros, and explain what each means for a thrown object.

★ CHALLENGE

show your work

10. $f_1(x) = x^2 + bx + 9$ is a perfect square (touches the x-axis once). Use graphing to find a b that works, then confirm the single zero.

★ CHALLENGE

show your work