Name: _____ Date: _____

Calculator in hand! Graph the model over the data, use max/min and zeros, and read a table to test predictions. Last two are challeng

1. Graph f1(x) = -16x^2 + 64x. Find the maximum.

show your work

2. Same: find the positive zero (landing time).

show your work

3. Graph f1(x) = x(20 - x). Find the vertex (max area).

show your work

4. Use a table (ctrl+T) to predict f1(7) for f1(x) = 3(2)^x.

show your work

5. Graph f1(x) = 100(1.5)^x and f2(x) = 40x + 100. Find where the exponential passes the line.

show your work

6. A model f1(x) = -0.5x^2 + 4x + 10. Find the max value.

show your work

7. Graph a linear fit f1(x) = 2x + 3 with data point (5, 12). Read f1(5) and find the residual.

show your work

8. Two models f1 = 5(2)^x and f2 = 3x + 50. Use a table to find the first whole x where f1 > f2.

show your work

9. ★ CHALLENGE

Model f1(x) = -16x^2 + 80x + 6. Find the max height and BOTH zeros; explain which zero is meaningful.

show your work

10. ★ CHALLENGE

A savings model f1(x) = 200(1.08)^x. Use the calculator to find the first whole year it exceeds $400 (doubles).

show your work