

Classwork Quadratic Functions

Please work all problems on a separate sheet of paper.

In exercises 1 – 4, sketch the graph of the function and determine vertex, axis of symmetry, and range.

1. $f(x) = -\frac{1}{4}x^2$

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

3. $f(x) = -2(x+3)^2 + 6$

4. $f(x) = \frac{1}{2}(x+5)^2 - 2$

In exercises 5 – 7, place the quadratic functions in standard form, and find the vertex, x-intercepts and sketch the graph.

5. $f(x) = x^2 + 2x - 5$

6. $f(x) = 2x^2 - 16x + 32$

7. $f(x) = 3x^2 - 12x + 17$

In exercises 8 – 9, find the x-int(s) of the graph and the max/min value of the quadratic, and sketch graph.

8. $f(x) = 4x^2 - 9$

9. $f(x) = -x^2 + 4x - 6$