

Worksheet – Quadratics

Be sure to show the work that leads to your answer. Late worksheets WILL NOT BE ACCEPTED.

1. For each of the quadratic functions below, do five things:

- find its roots, if any
- find its y-axis intercept
- complete the square
- graph it (plot roots (if any), vertex, and y-intercept)
- determine its range

(1) $x^2 - 4x$

(2) $x^2 + 3x - 4$

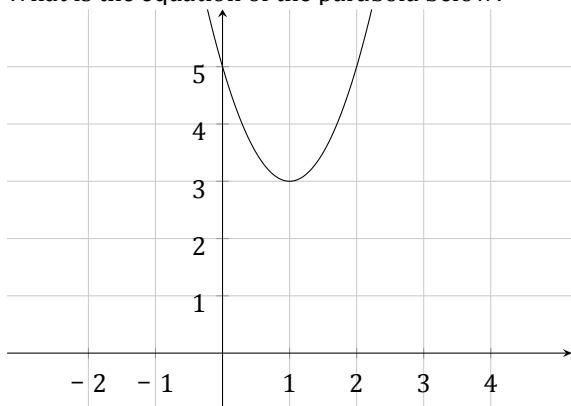
(3) $-x^2 + 6x + 2$

(4) $3x^2 - 9x + 12$

(5) $2x^2 + 3x + 4$

2. Find a function f whose graph is a parabola with a vertex at $(1,3)$ such that $f(2) = 7$.

3. What is the equation of the parabola below?



4. What is the equation of the parabola below?

