

# Pop Quiz

Math 113-001/6 College Algebra  
Colorado Mesa University Fall 2022

Name: \_\_\_\_\_

1. What are the coordinates of the vertex and of the two  $x$ -intercepts of the parabola that is the graph of  $f(x) = -\frac{7}{4}(x-3)^2 + 7$ ?

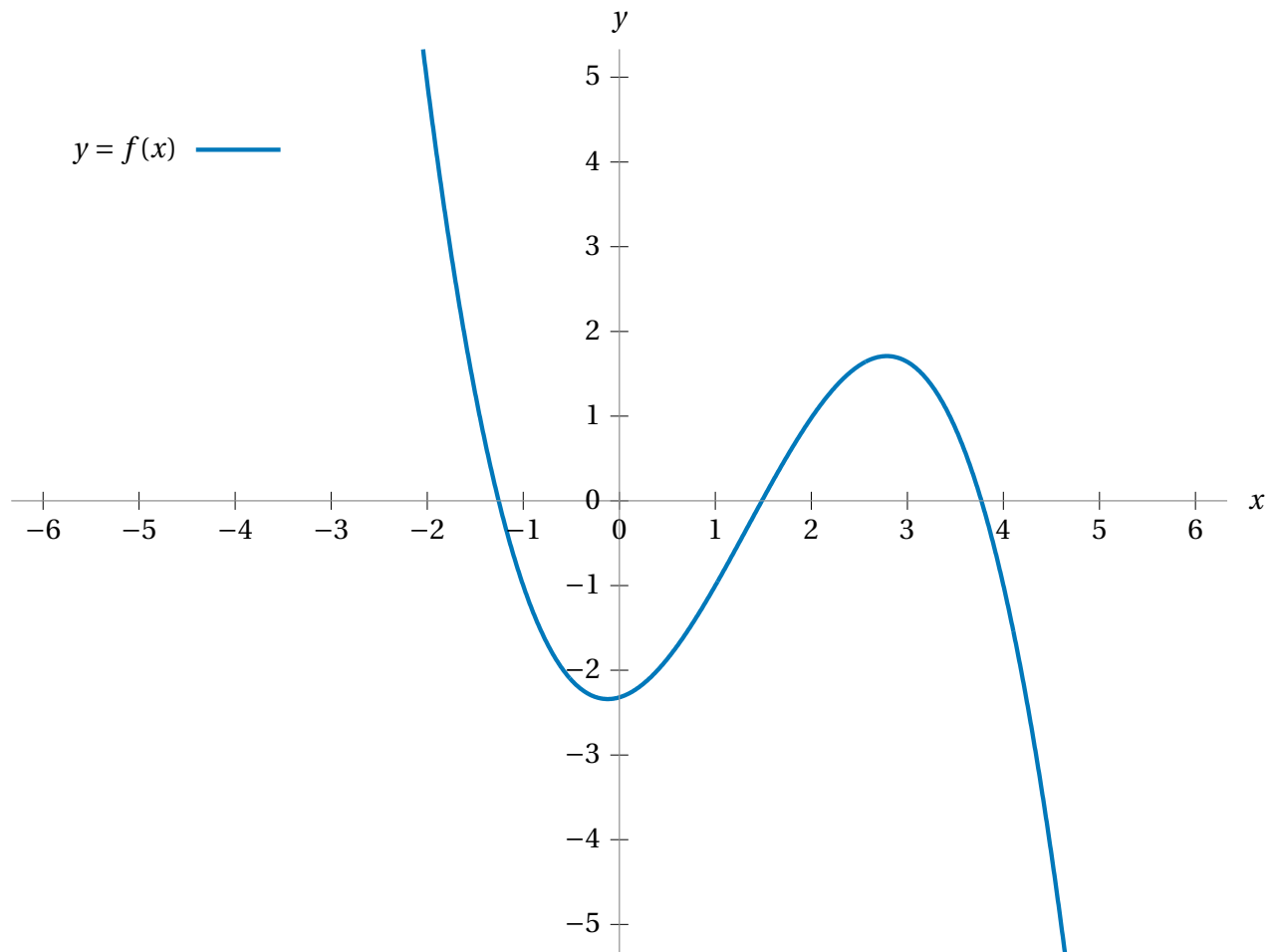
2. The function  $f$  defined by the formula

$$f(x) = \frac{7}{x-1} + 4$$

is a one-to-one function. Write down a formula for its inverse function  $f^{-1}$ .

3. If  $f(x) = 3x^2 - 5$  and  $g(x) = |x - 9|$ , what is a formula for  $f \circ g$ ? What is a formula for  $g \circ f$ ?

4. Below is the graph of a function  $f(x)$ .



(a) On this same set of axes, sketch the graph of the function  $-f(-x)$ .

(b) On this same set of axes, sketch the graph of the function  $f(x+5)+2$ .

(c) On this same set of axes, sketch the graph of the function  $|f(x)|$ .