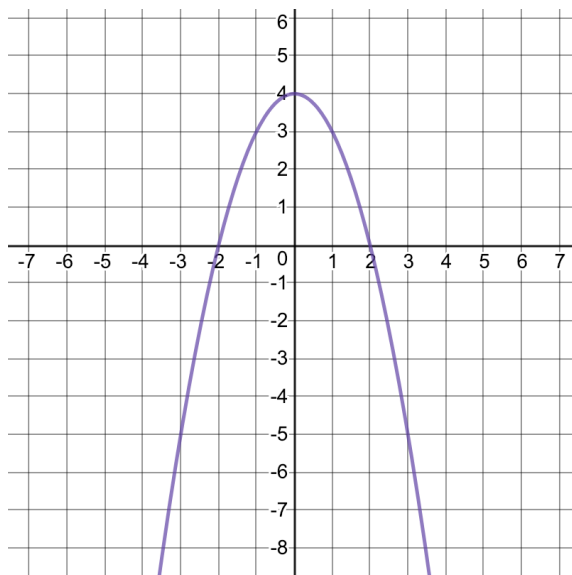


Question:	1	2	3	Total
Points:	10	4	6	20
Score:				

Submit your written solutions by the end of the day Friday on Blackboard (look for the "Quiz #2" Assignment). Please scan your written answers to a single pdf file.

1. (10 points) Shown below is the graph of the function $f(x) = -x^2 + 4$:



- (a) Compute the following values of f (show your calculations), and label the corresponding points on the graph above:

- $f(0) =$
- $f(1) =$
- $f(-3) =$

- (b) What is the domain of f ? What is the range of f ? Write the solutions in interval notation:

- domain of f :
- range of f :

2. (4 points) Find the domain of each of the following functions. Show the necessary calculations, and write the solutions in interval notation:

(a)

$$g(x) = \frac{1}{x-2}$$

(b)

$$h(x) = \sqrt{x+1}$$

3. (6 points) Let $f(x) = 2x^2 - 3x + 1$.

(a) Compute and simplify:

$$f(x+h) =$$

(b) Next, compute and simplify:

$$f(x+h) - f(x) =$$

(c) Finally, compute and simplify the difference quotient:

$$\frac{f(x+h) - f(x)}{h} =$$