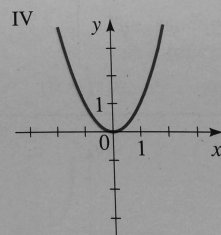| Math 1050 A2.2a	Name

1.

Match the function with its graph.
(a) $f(x) = x^2$ (b) $f(x) = x^3$
(c) $f(x) = \sqrt{x}$ (d) $f(x) = |x|$

I

II

III

IV
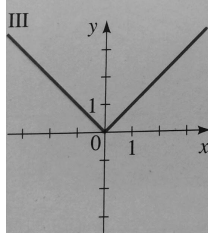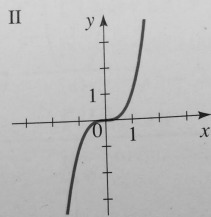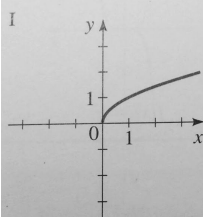
2. Evaluate the function for the indicated Values: make sure your answer is reduced.

$$h(t) = -t + \frac{5}{t}$$

$h(-1) =$

$h(2) =$

$h(\frac{1}{2}) =$

$h(x-2) =$

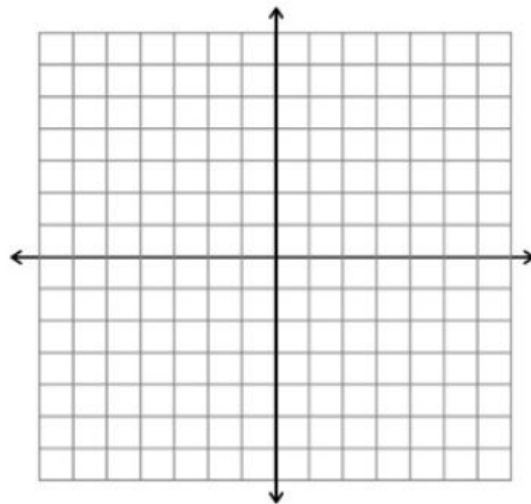$h(\frac{2}{x}) =$

3. Complete the table, then sketch the graph.
$h(x) = 4x^2 - x^3$

x	y

Make sure you label your graph!

4. Complete the table, then sketch the graph.
$h(x) = \sqrt{5-x}$

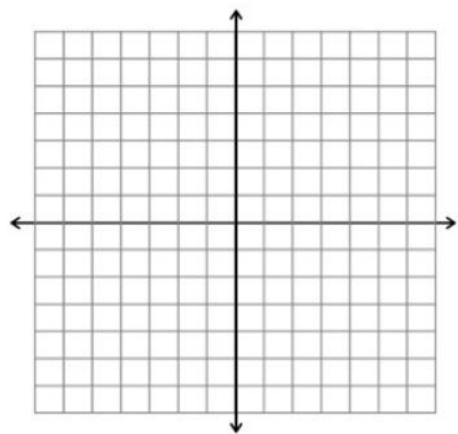| x	y

Make sure you label your graph!

5. Complete the table, then sketch the graph.

$h(x) = \frac{x-3}{2}$; $0 \leq x \leq 5$

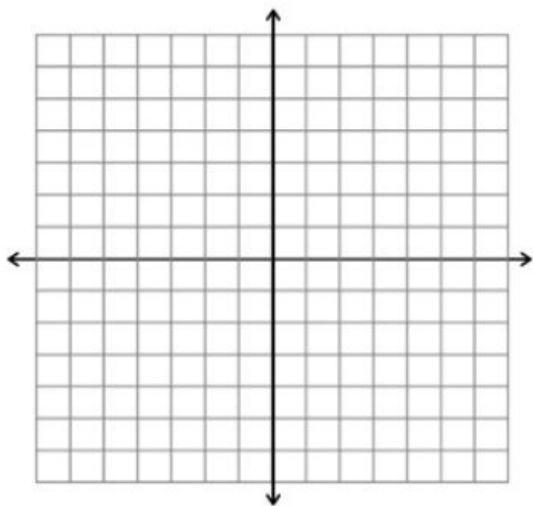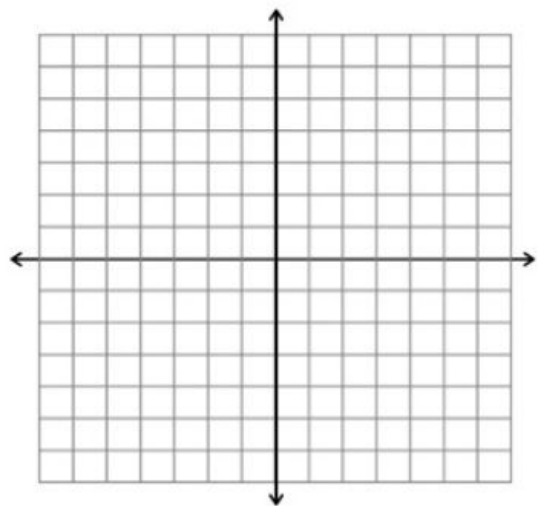| x	y

Make sure you label your graph!

6. Sketch the piecewise function. Make sure you label your graph!

$$f(x) = \begin{cases} 1 - x & \text{if } x < -2 \\ 5 & \text{if } x \geq -2 \end{cases}$$

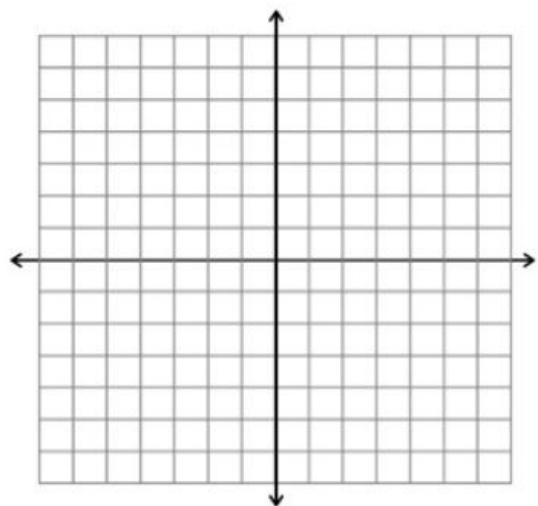7. Sketch the piecewise function. Make sure you label your graph!

$$f(x) = \begin{cases} 2x + 3 & \text{if } x < -1 \\ 3 - x & \text{if } x \geq -1 \end{cases}$$

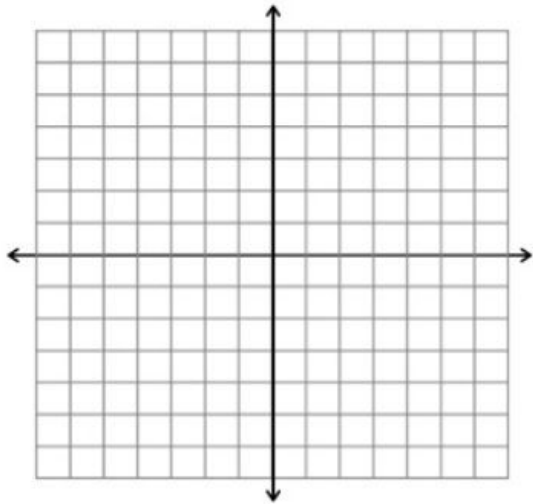8. Sketch the piecewise function. Make sure you label your graph!

$$f(x) = \begin{cases} -1 & \text{if } x < -1 \\ x & \text{if } -1 \leq x \leq 1 \\ 1 & \text{if } x > 1 \end{cases}$$

8. cont

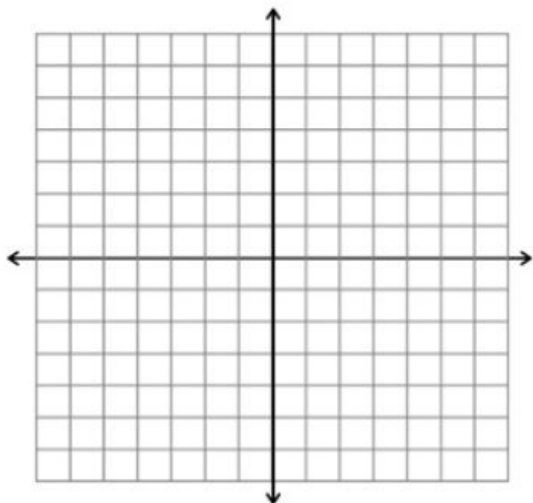|	
9. Sketch the piecewise function. Make sure you label your graph! $$f(x) = \begin{cases} 4 & \text{if } x < -2 \\ x^2 & \text{if } -2 \le x \le 2 \\ -x + 6 & \text{if } x > 2 \end{cases}$$	10. Find $f(a),\ f(a+h),$ *and the difference quotient* $$\frac{f(a+h) - f(a)}{h}, \text{ where } h \ne 0.$$ $f(x) = x^2 + 7$
11. Find $f(a),\ f(a+h),$ *and the difference quotient* $$\frac{f(a+h) - f(a)}{h}, \text{ where } h \ne 0.$$ $$f(x) = \frac{5x}{x-1}$$	12. Find the Domain of the Function. Write your answer in interval notation: $$f(x) = \frac{3}{x^2 - 25}$$
13. Find the net change in the value of the function between the given inputs. $f(x) = 6t - t^2;$ from -3 to 4.	14. If f(2)=3, then the point (2,____) is on the graph.
15. Find the Domain of the Function. Write your answer in interval notation: $f(x) = \sqrt[3]{x - 1}$	16. Find the Domain of the Function. Write your answer in interval notation: $f(x) = \sqrt{6x - 2x^2}$

17. Find the Domain of the Function. Write your answer in interval notation:
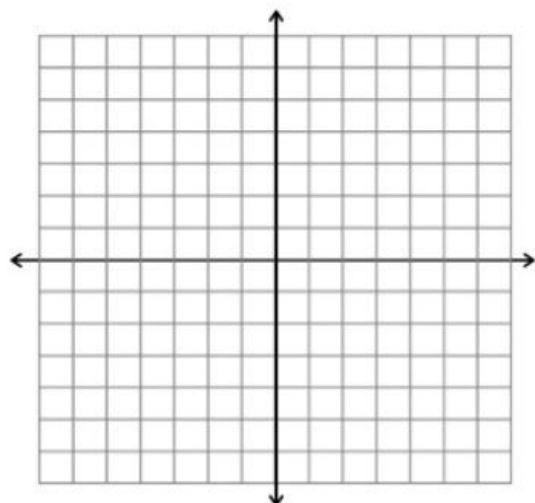$f(x) = \sqrt{x^2 - 5x}$

18. Sketch the piecewise function. Make sure you label your graph!

$$f(x) = \begin{cases} 3 & \text{if } x < 2 \\ x - 1 & \text{if } x \geq 2 \end{cases}$$

19. Sketch the piecewise function. Make sure you label your graph!

$$f(x) = \begin{cases} x & \text{if } x \leq 0 \\ x + 1 & \text{if } x > 0 \end{cases}$$

20. Complete the table, then sketch the graph.
$h(x) = 16 - x^2$

x	y

Make sure you label your graph!