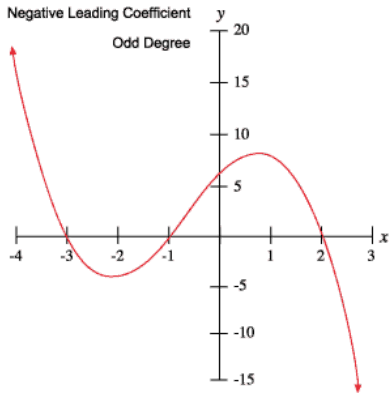
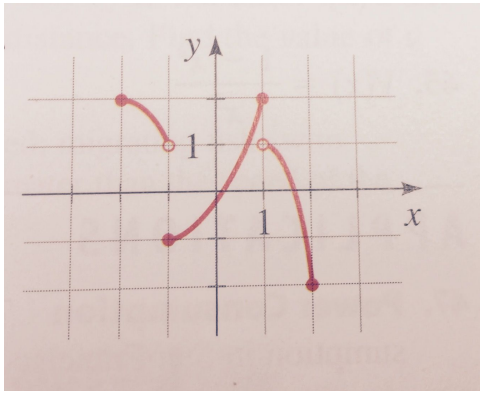
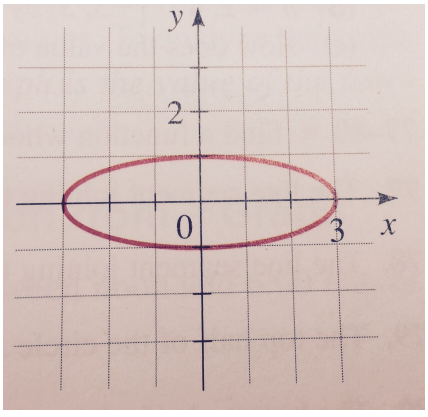
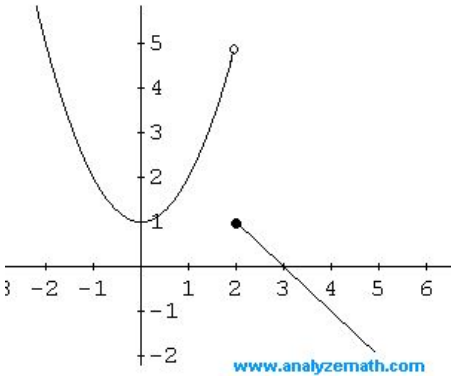
Math 1050 A2.3 Getting Information from a Graph	Name
 1. Is the above graph a function? Yes/No Is the above graph one-to-one? Yes/No What is f(-2)? What is f(0)? What is the Domain? What is the Range? Interval(s) of Increasing? Interval(s) of Decreasing?	 2. Is the above graph a function? Yes/No Is the above graph one-to-one? Yes/No What is f(1)? What is f(-2)? What is the Domain? What is the Range? Interval(s) of Increasing? Interval(s) of Decreasing?
 3. Is the above graph a function? Yes/No Is the above graph one-to-one? Yes/No What is f(3)? What is f(0)? What is the Domain? What is the Range? Interval(s) of Increasing? Interval(s) of Decreasing?	 4. Is the above graph a function? Yes/No Is the above graph one-to-one? Yes/No What is f(1)? What is f(2)? What is the Domain? What is the Range? Interval(s) of Increasing? Interval(s) of Decreasing?

5. Determine whether the equation defines y as a function of x.

$x^2 + 2y = 4$

6. Determine whether the equation defines y as a function of x.

$x = y^2$

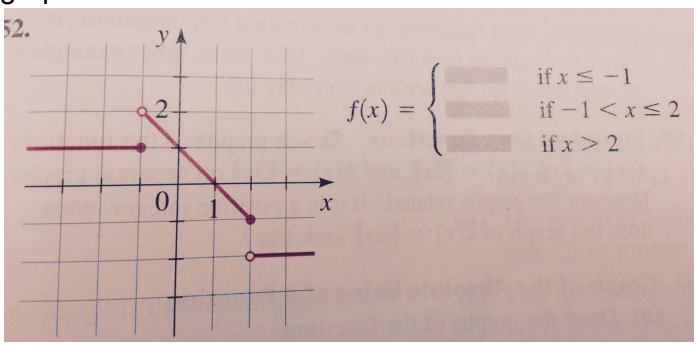
7. Determine whether the equation defines y as a function of x.

$3x + 7y = 21$

8. Determine whether the equation defines y as a function of x.

$x^2 + (y-1)^2 = 4$

9. Write the equations for the following piecewise graph.

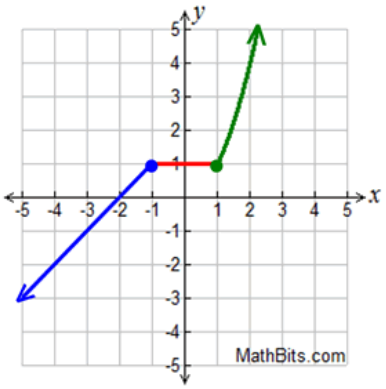


_____ if x≤− 1

_____ if -1<x≤ 2

_____ if x > 2

10. Write the equations for the following piecewise graph.



_____ if x≤_____

_____ if _____< x ≤ _____

_____ if x > _____

11. Find the Difference Quotient:

$\frac{f(a+h) - f(a)}{h}$, where $h \neq 0$.

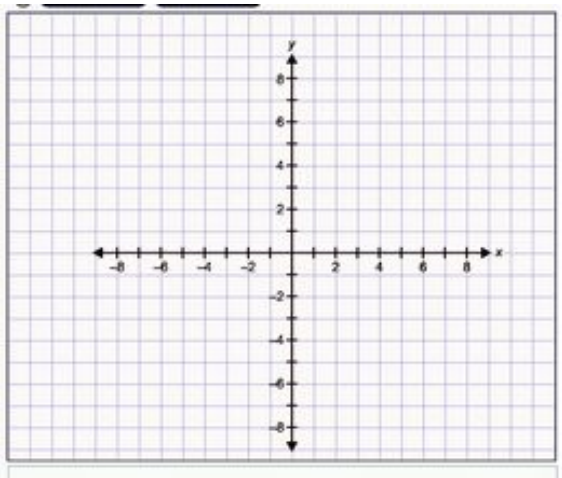
$f(x) = 3 - 5x + 4x^2$

12. Graph the piecewise functions f(x) =

3x if x ≤ 0

1 - x if 0 <x≤2

$(x-2)^2$ if x > 2



13.

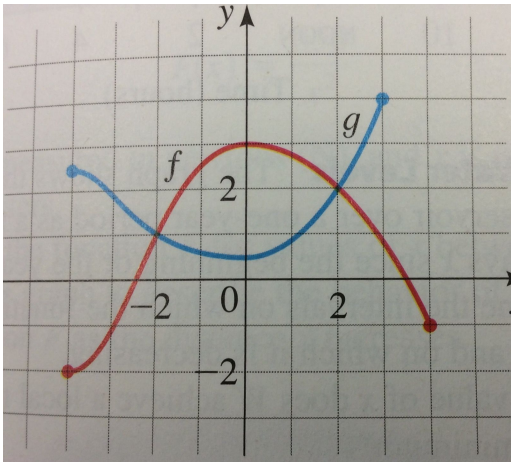
Speeding Tickets In a certain state the maximum speed permitted on freeways is 65 mi/h, and the minimum is 40. The fine F for violating these limits is $15 for every mile above the maximum or below the minimum.

(a) Complete the expressions in the following piecewise defined function, where x is the speed at which you are driving.

$$F(x) = \begin{cases} \_\_\_\_ & \text{if } 0 < x < 40 \\ \_\_\_\_ & \text{if } 40 \le x \le 65 \\ \_\_\_\_ & \text{if } x > 65 \end{cases}$$

- _____
- _____
- _____

14.

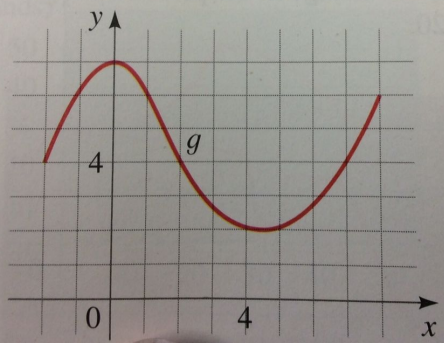


Which is larger f(0) of g(0)?
Which is larger f(-3) or g(-3)?
For which values of x if f(x) = g(x)?
Range of f(x)
Range of g(x)?

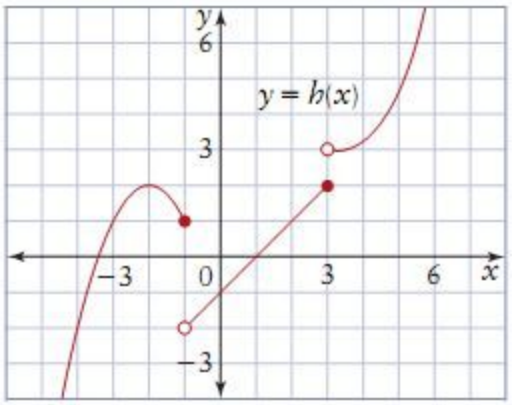
15.

The graph of a function g is given.

(a) Find $g(-2)$, $g(0)$, and $g(7)$.
(b) Find the domain and range of g.
(c) Find the values of x for which $g(x) = 4$.
(d) Find the values of x for which $g(x) > 4$.
(e) Find the net change in g between $x = 0$ and $x = 7$.



16.



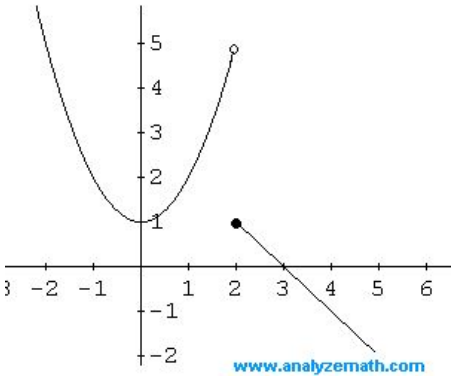
Domain:
Range:
Interval(s) of Increasing:
Interval(s) of Decreasing:

17. Equations of the Piecewise Function above

_____, when x ≤ _____

_____, when _____< x ≤_____

_____, when x > _____



18.

Equations of the Piecewise Function above

_____, when x < _____

_____, when x ≥ _____

19. Domain of

a. $y = \frac{x-3}{x-7}$

B. $y = \sqrt{25 - x^2}$