

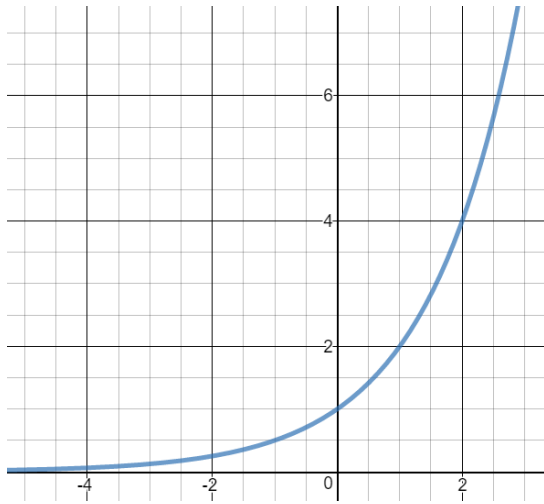
Graphs and Volume Review

Name _____

Period _____

Find the average rate of change of the given function on the indicated intervals.

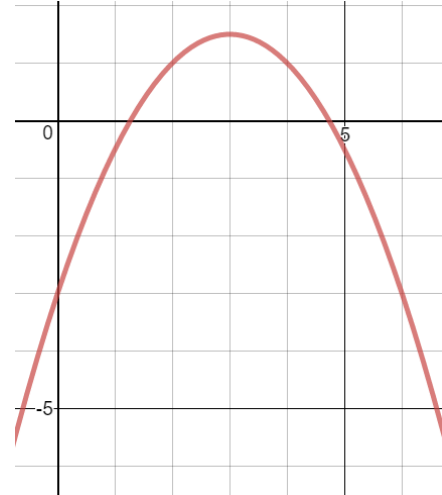
1.



a. $[0, 1]$

b. $[0, 2]$

2.



a. $[2, 4]$

b. $[0, 2]$

3. $f(x) = 7x + 3$

a. $[0, 6]$

b. $[6, 5000]$

4. $s(x) = x^2 + x - 2$

a. $[0, 1]$

b. $[2, 4]$

Graphs and Volume Review

Solve the following systems of equations algebraically and fill in the desired information. (You must show your work to get credit: do not use your calculator except to check your answers)

5. $-2x^2 + 7x + y - 4 = 0$
 $3x + y - 2 = 0$

Circle One: Inconsistent, Dependent, Independent

6. $-x^2 - y + 11 = 0$
 $2x^2 = -2y + 22$

Circle One: Inconsistent, Dependent, Independent

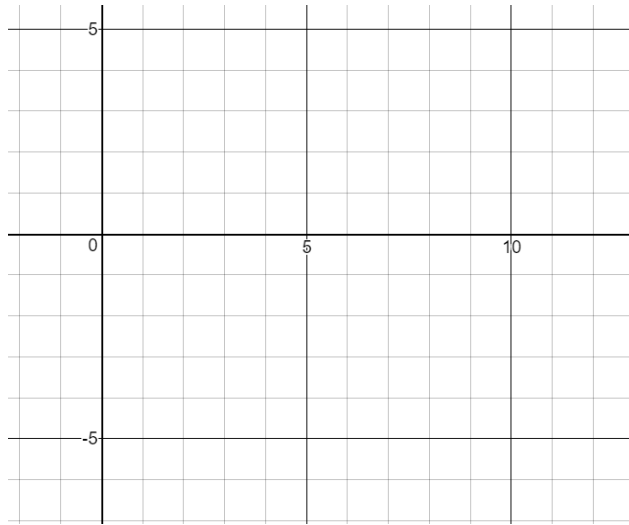
7. $5x^2 + 6x + y - 2 = 0$
 $-x + y = 8$

Circle One: Inconsistent, Dependent, Independent

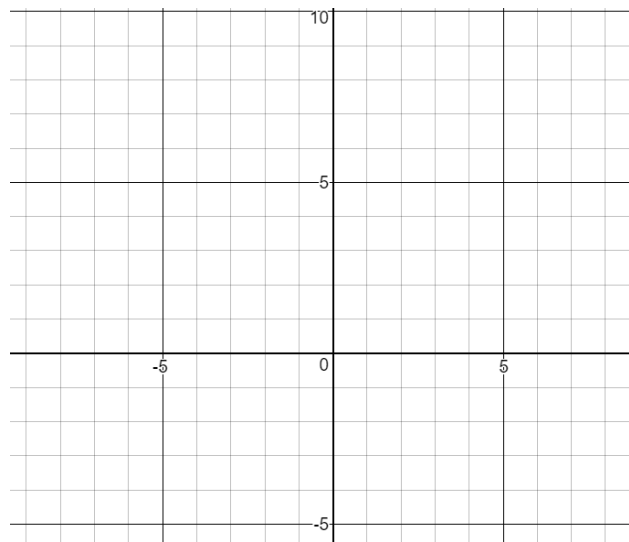
Graphs and Volume Review

Solve the following systems of equations graphically (you can use your calculator).
Additionally, sketch a graph of the two functions (at least 5 points for parabolas).

8. $6x - x^2 - 6 - y = 0$
 $x + y = 0$



9. $x^2 + 2x + 2 - y = 0$
 $8x - 2y = -2$



Review

Write the volume formulas for the following:

10) Rectangular Prism

11) Cylinder

12) Rectangular Pyramid

13) Cone

14) Sphere

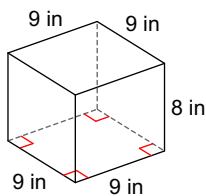
15) Square Prism

Solve problems 10-15 formulas for the height, h .

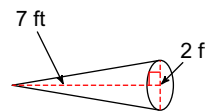
16)

Find the exact and approximate volume of each figure. Round your answers to the nearest hundredth, if necessary.

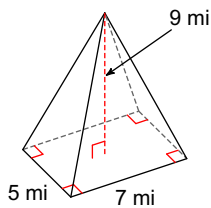
17)



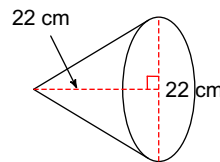
18)



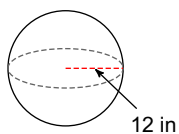
19)



20)



21)



22) If the radius in problem 21 were doubled, how would this change the circumference of the circle you get inside when you cut the sphere in half.

23) If the radius in problem 21 were doubled, how would this change the surface area of the sphere?

24) If the radius in problem 21 were doubled, how would this change the volume of the sphere?