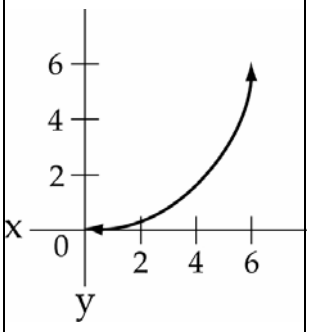
Function Cards

1.

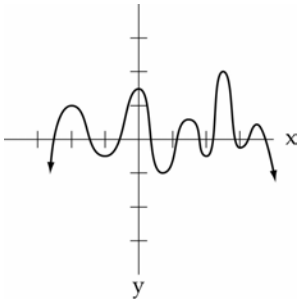


8. Joe is considering which size of pizza is the better buy. He wonders what happens to the area of the pizza when the diameter of the pizza is doubled.

15.

$$y = 4x + \frac{1}{3}$$

22.



2.

x	y
-2	-2
-1	-1
0	0
1	-1
2	-2
3	-1

9.

$$y = 4x^4 - 3x^3 + 9x^2$$

16.

x	y
$\frac{1}{100}$	-2
$\frac{1}{10}$	-1
1	0
10	1

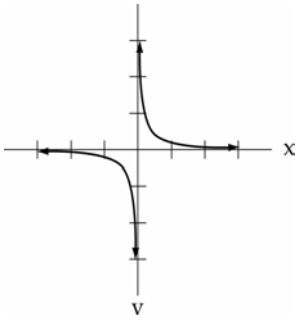
23. Columbus has a population of 50,000 people. Recent studies show that over the past 30 years that population has increased at an annual rate of 3%. Social scientists predict Columbus will experience this same growth over the next 30 years.

3. Maggie is filling a cubicle container measuring two feet on each edge with water. She notices that it takes a lot more water when each dimension of the cube is increased. She wonders how much the volume of the cube increases when each dimension is increased x units.

10.

$$y = \sin x$$

17.



24. Workers use the following approach to locate the blockage of a sewage line. They start at the midpoint to determine which half has the blockage. They then divide the remaining part of the line into two equal parts and repeat the process of determining which half of the line has the blockage. This process continues until the distance between the partition and the blockage is less than 10 feet. Mr. Adams wants to know the number of partitions necessary to guarantee finding the blockage within 10 feet for any line greater than 20 feet.

4.

x	Y
-1	-2
0	-1
1	0
2	7
3	26

11. Mr. Jones has noticed an increase of 5 cents per gallon in the price of gas over the past four weeks. If the current price is $1.589, he wonders what the price will be in the coming weeks if this same price increase continues each week.

18.

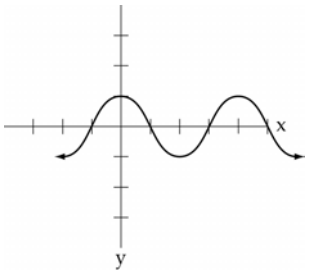
$$y = 6^x$$

25.

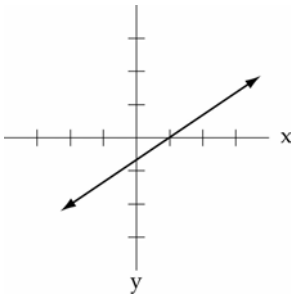
x	y
-2	-5
-1	-2
0	1
1	4
2	7

5. Ms. Smith sets aside $30 each week for gas for her car. She notices that every time the cost of a gallon rises, the number of gallons she can purchase with $30 decreases.

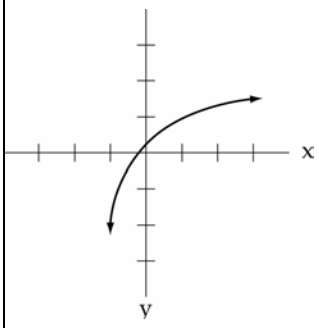
12.



19.



26.



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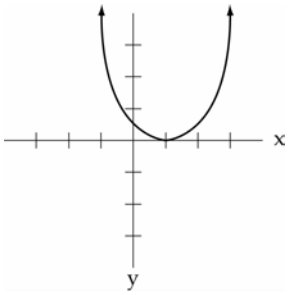

13.

$$y = \frac{2}{7x}$$

20.

$$y = \log(x+3)$$

27. The bank has a sign showing its weekly hours as follows:

Monday: Closed
Tuesday-Friday: 9 am - 6 pm
Saturday: 10 am – 6 pm
Sunday: Noon – 5 pm

Graph the number of hours the bank is open for each day in June.

7.

$$y = 2x^2 - 3x + 7$$

14.

x	y
-2	$-\frac{1}{2}$
-1	-1
1	1
2	$\frac{1}{2}$
4	$\frac{1}{4}$

21.

x	y
-1	2
0	1
1	2
2	5
3	10

28.

x	y
-2	$\frac{1}{4}$
-1	$\frac{1}{2}$
0	1
1	2
2	4