

EOC REVIEW: RC#1

Answer #1-15 to solve the riddle:

What do you get when you cross a chicken with a centipede?

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
1.	The volume of a sphere can be found by using the function $V = \frac{4}{3}\pi r^3$, where V represents the volume and r represents the radius. What is the dependent quantity in this function?								2.	If y is a function of x in the equation $y = x^2 - 9$, which statement is true?					
	C) π									O) The independent variable x is equal to 9 less than the square of the dependent variable y .					
	E) V									L) The independent variable y is equal to 9 less than the square of the dependent variable x .					
	T) r									X) The dependent variable y is equal to 9 less than the square of the independent variable x .					
	R) $\frac{4}{3}$									A) The dependent variable x is equal to 9 less than the square of the independent variable y .					
3.	A department store had a 20%-off sale on all clothing items. Which statement best represents the functional relationship between the sale price of an article of clothing and the original price?								4.	Luxury Limousine charges a fee of \$50 per hour to rent a limousine plus \$0.15 per mile driven. Which equation can be used to determine c , the total cost to rent a limousine for 3 hours, if m represents the number of miles the limousine is driven?					
	B) The original price is dependent on the sale price.									E) $c = 50 + 0.15m$					
	T) The sale price is dependent on the original price.									D) $c = 50 + 0.45m$					
	V) The sale price and the original price are independent of each other.									P) $c = 150 + 0.45m$					
	R) The relationship cannot be determined.									R) $c = 150 + 0.15m$					
5.	The Alejo family budgeted \$2000 for their vacation. Their budget consisted of \$800 for travel costs and \$75 per day for other expenses. Which inequality represents the number of days, x , the family could have stayed on vacation?								6.	Mitesh is m years old, and his brother Hiren is h years old. Which statement best describes the inequality $m \geq h + 3$?					
	A) $800 + 75x \leq 2000$									E) Mitesh is at least 3 times as old as Hiren.					
	J) $800x + 75 \geq 2000$									D) Mitesh is at least 3 years older than Hiren.					
	M) $800x - 75 \geq 2000$									N) Hiren is more than 3 years older than Mitesh.					
	R) $800 - 75x \leq 2000$									S) Hiren is more than 3 times as old as Mitesh.					

7. An artist studies human proportions in order to make realistic drawings. He observes that a person's kneeling height, y , is $\frac{3}{4}$ of the person's standing height, x . Which equation best represents this relationship?

R) $y = \frac{3}{4}x$

A) $y = -\frac{3}{4}x$

E) $y = x - \frac{3}{4}$

W) $y = x + \frac{3}{4}$

9. The table below shows the relationship between p , the number of cell phones a company produces, and d , the number of cell phones that are defective.

Cell Phones

Number Produced	Number Defective
100	5
200	10
300	15
400	20
500	25

Which equation can be used to describe this relationship?

F) $d = 20p$

K) $d = \frac{p-90}{2}$

M) $d = 0.05p$

E) $d = p - 95$

8. The total cost, c , of leasing a car can be expressed by the equation $c = 1800 + 185m$, where m is the number of months the car is leased. Which statement is true based on the information given?

O) The car must be leased for at least 60 months.

U) The total cost of leasing this car for 1 year is more than \$4000.

Y) The total cost of leasing this car for 2 years is \$4020.

B) The cost of leasing this car is greater than the cost of buying one.

10. A consumer group measured an automobile's acceleration by using the data shown below.

Time, t (seconds)	Distance from Starting Line, d (feet)
0	0
2	21
5	131.25
6	189
9	425.25

Which equation best represents the relationship between d , the automobile's distance from the starting line, and t , the time?

C) $d = 10.5t^2$

N) $d = 10.5t^3$

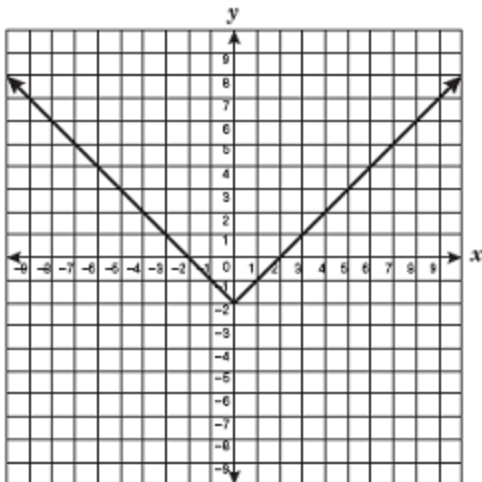
E) $d = 5.25t$

S) $d = 5.25t^2$

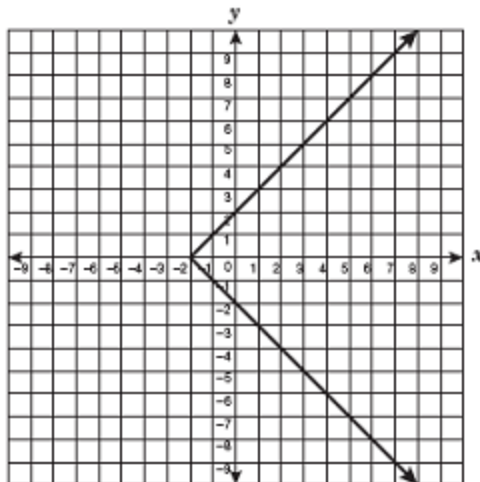
11.

Which of the following graphs does not represent y as a function of x ?

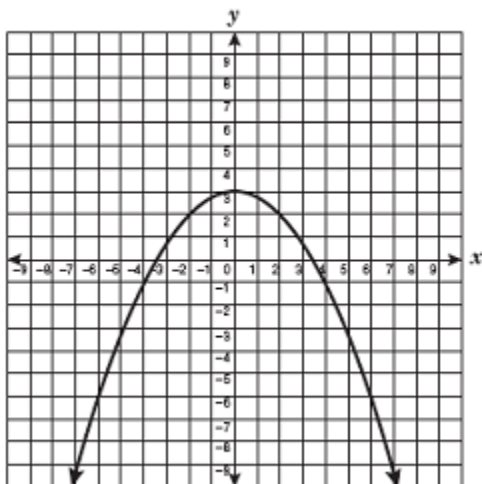
A)



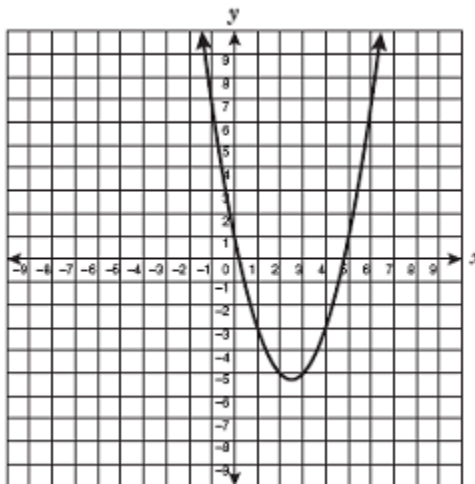
T)



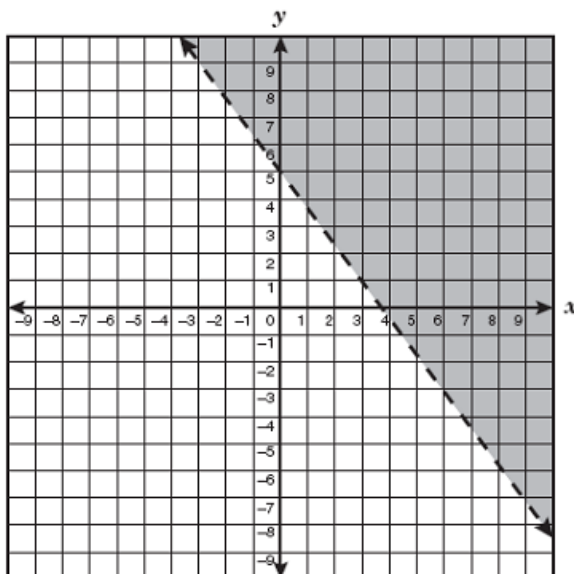
C)



S)



12. Which inequality best describes the graph shown below?



P) $y > -\frac{3}{4}x + 5$

O) $y < -\frac{4}{3}x + 5$

E) $y < -\frac{3}{4}x + 5$

D) $y > -\frac{4}{3}x + 5$

13. Troy borrowed money from his father so that he could buy a used car. The table shows the remaining balance, b , of Troy's loan after each payment.

Troy's Loan Balance

Number of Payments, p	Loan Balance, b
1	\$3910
2	\$3685
3	\$3460
4	\$3235
5	\$3010
6	\$2785

Which function can be used to describe this relationship?

- W) $b = 3910 + 225p$
 C) $b = 4135 - 225p$
 F) $b = 2785 + 225p$
 Z) $b = 3685 - 225p$

14. Which data set is best described by the function $y = -2x^2 + 5x$?

O)

x	y
-4	-52
-1	-3
2	2
3	9
6	-42

 K)

x	y
-3	-33
-1	-7
2	2
3	-3
5	-25

I)

x	y
-5	-75
-3	-33
1	7
4	52
6	-42

 L)

x	y
-2	-18
2	-2
5	-24
6	-42
8	-88

15. Which mapping best represents the function $y = 2x^2 + 1$ when the replacement set for x is $\{-1, 0, 3\}$?

