Solve: $9 + a = 15$	$a =$
Evaluate: $12 + (-8) + 3$	
Simplify: $2x + 4 + 3x + 5$	
Solve: $12 - k = 4$	$k =$
Simplify: $4(3 + s) - 7$	
Simplify: $b + b + 2b$	
Solve: $\frac{r}{6} = \frac{12}{18}$	$r =$
Simplify: $7 - 3(f - 2)$	
Evaluate: $-5 + (-4) - 1$	
Solve: $63 \div c = 9$	$c =$
Simplify: $2(s - 1) + 4 + 5s$	
Simplify: $8m - 9(m + 2)$	
Solve: 3 ft. = 1 yd. ____ ft. = 9 yds.	
Evaluate: $4 - (-2) + 8$	
Simplify: $2k + 3 - 5(k + 7)$	

Solve: $10 - 6 = g$	$g =$
Simplify: $9 - 4d + 2 + 7d$	
Simplify: $5(b - 3) - b$	
Solve: $q \bullet 5 = 30$	$q =$
Evaluate: $8 - (-6) - 4$	
Simplify: $2 + w(w - 5)$	
Solve: 1 ft. =12 in. 5 ft. = ____ in.	
Simplify: $4 - 7b + 5(b - 1)$	
Simplify: $s + 2s - 4s$	
Solve: $x + 4 = 7$	$x =$
Simplify: $-5(q + 3) + 9$	
Evaluate: $9 + (-3) - 8$	
Solve: $\frac{12}{2} = \frac{48}{m}$	$m =$
Simplify: $y^2 + y - 4y + 3y^2$	
Simplify: $3(c + 2) - 2c$	

OSEP Award# H324C030060

Solve: $3 \bullet 8 = m$	$m =$
Evaluate: $-9 + 5 + 8$	
Simplify: $x + 2(x - 5) - 3$	
Solve: $d - 5 = 4$	$d =$
Simplify: $5(3 + f) - 2f + 6$	
Simplify: $5 - 2b + 4(b + 3)$	
Solve: 4 qts. = 1 gal. ____ qts. = 3 ¼ gals.	
Simplify: $4(y + 1) - 8y$	
Evaluate: $14 - 7 + (-3)$	
Solve: $\frac{36}{6} = s$	$s =$
Simplify: $-3w^2 + 5w^2 - 5 + 12$	
Simplify: $9 - 4(v + 2)$	
Solve: $4r = 28$	$r =$
Simplify: $16 + 2(t - 4) - 3t$	
Simplify: $c - 3(c + 2) + 8$	

Solve: $\frac{1.5}{3} = \frac{h}{9}$	$h =$
Simplify: $7b - 4 - 3 - 2b$	
Simplify: $2j - 3(j - 4)$	
Solve: $6 + 7 = v$	$v =$
Evaluate: $-5 + 6 - 6$	
Simplify: $4 + 10(1 - r)$	
Solve: 2.5 cm. = 1 in. ____ cm. = 6 in.	
Simplify: $6a + 2a - 9 + 3a^2$	
Evaluate: $-1 + 4 + (-7)$	
Solve: $\frac{500}{j} = \frac{10}{2}$	$j =$
Simplify: $-3(u + 3) - 2u + 5$	
Simplify: $2c - 3c - c$	
Solve: $h \div 6 = 8$	$h =$
Evaluate: $-2 + (-5) + (-8)$	
Simplify: $3z - 8z + 2 + 9$	

OSEP Award# H324C030060

Anna

Solve: $9 + a = 15$	$a =$ 6
Evaluate: $12 + (-8) + 3$	23
Simplify: $2x + 4 + 3x + 5$	$9+5x$
Solve: $12 - k = 4$	$k =$ 8
Simplify: $4(3 + s) - 7$	$5+5$
Simplify: $b + b + 2b$	$2b^3$
Solve: $\frac{r}{6} = \frac{12}{18}$	$r =$
Simplify: $7 - 3(f - 2)$	$7-3f-6$
Evaluate: $-5 + (-4) - 1$	-10
Solve: $63 \div c = 9$	$c =$ 7
Simplify: $2(s - 1) + 4 + 5s$	$7s+3$
Simplify: $8m - 9(m + 2)$	$17m+2$
Solve: 3 ft. = 1 yd. ____ ft. = 9 yds.	27
Evaluate: $4 - (-2) + 8$	14
Simplify: $2k + 3 - 5(k + 7)$	$3k+10$

Solve: $10 - 6 = g$	$g =$ 4
Simplify: $9 - 4d + 2 + 7d$	$11+3d$
Simplify: $5(b - 3) - b$	$4b-3$
Solve: $q \cdot 5 = 30$	$q =$ 6
Evaluate: $8 - (-6) - 4$	10
Simplify: $2 + w(w - 5)$	
Solve: 1 ft. =12 in. 5 ft. = ____ in.	
Simplify: $4 - 7b + 5(b - 1)$	$4-7b+5b-5$
Simplify: $s + 2s - 4s$	
Solve: $x + 4 = 7$	$x =$ 3
Simplify: $-5(q + 3) + 9$	$-5q-15+9$
Evaluate: $9 + (-3) - 8$	2
Solve: $\frac{12}{2} = \frac{48}{m}$	$m =$
Simplify: $y^2 + y - 4y + 3y^2$	
Simplify: $3(c + 2) - 2c$	$6+c$

OSEP Award# H324C030060

Anna

Solve: $3 \cdot 8 = m$	$m =$ 24
Evaluate: $-9 + 5 + 8$	
Simplify: $x + 2(x - 5) - 3$	
Solve: $d - 5 = 4$	$d =$ 9
Simplify: $5(3 + f) - 2f + 6$	
Simplify: $5 - 2b + 4(b + 3)$	
Solve: 4 qts. = 1 gal. ____ qts. = 3 ¼ gals.	
Simplify: $4(y + 1) - 8y$	
Evaluate: $14 - 7 + (-3)$	
Solve: $\frac{36}{6} = s$	$s =$ 6
Simplify: $-3w^2 + 5w^2 - 5 + 12$	
Simplify: $9 - 4(v + 2)$	
Solve: $4r = 28$	$r =$ 7
Simplify: $16 + 2(t - 4) - 3t$	
Simplify: $c - 3(c + 2) + 8$	

Solve: $\frac{1.5}{3} = \frac{h}{9}$	$h =$
Simplify: $7b - 4 - 3 - 2b$	
Simplify: $2j - 3(j - 4)$	
Solve: $6 + 7 = v$	$v =$ 13
Evaluate: $-5 + 6 - 6$	-5
Simplify: $4 + 10(1 - r)$	
Solve: 2.5 cm. = 1 in. ____ cm. = 6 in.	
Simplify: $6a + 2a - 9 + 3a^2$	
Evaluate: $-1 + 4 + (-7)$	-4
Solve: $\frac{500}{j} = \frac{10}{2}$	$j =$
Simplify: $-3(u + 3) - 2u + 5$	
Simplify: $2c - 3c - c$	2c
Solve: $h \div 6 = 8$	$h =$ 48
Evaluate: $-2 + (-5) + (-8)$	
Simplify: $3z - 8z + 2 + 9$	

OSEP Award# H324C030060

Solve: $9 + a = 15$	$a =$ **6**
Evaluate: $12 + (-8) + 3$	**7**
Simplify: $2x + 4 + 3x + 5$	$\mathbf{5x + 9}$
Solve: $12 - k = 4$	$k =$ **8**
Simplify: $4(3 + s) - 7$	$\mathbf{4s + 5}$
Simplify: $b + b + 2b$	$\mathbf{4b}$
Solve: $\frac{r}{6} = \frac{12}{18}$	$r =$ **4**
Simplify: $7 - 3(f - 2)$	$\mathbf{-3f + 13}$
Evaluate: $-5 + (-4) - 1$	**– 10**
Solve: $63 \div c = 9$	$c =$ **7**
Simplify: $2(s - 1) + 4 + 5s$	$\mathbf{7s + 2}$
Simplify: $8m - 9(m + 2)$	$\mathbf{-m - 18}$
Solve: 3 ft. = 1 yd. ____ ft. = 9 yds.	**27**
Evaluate: $4 - (-2) + 8$	**14**
Simplify: $2k + 3 - 5(k + 7)$	$\mathbf{-3k - 32}$

Solve: $10 - 6 = g$	$g =$ **4**
Simplify: $9 - 4d + 2 + 7d$	$\mathbf{3d + 11}$
Simplify: $5(b - 3) - b$	$\mathbf{4b - 15}$
Solve: $q \cdot 5 = 30$	$q =$ **6**
Evaluate: $8 - (-6) - 4$	**10**
Simplify: $2 + w(w - 5)$	$\mathbf{w^2 - 5w + 2}$
Solve: 1 ft.=12 in. 5 ft.= ____ in.	**60**
Simplify: $4 - 7b + 5(b - 1)$	$\mathbf{-2b - 1}$
Simplify: $s + 2s - 4s$	$\mathbf{-s}$
Solve: $x + 4 = 7$	$x =$ **3**
Simplify: $-5(q + 3) + 9$	$\mathbf{-5q - 6}$
Evaluate: $9 + (-3) - 8$	**– 2**
Solve: $\frac{12}{2} = \frac{48}{m}$	$m =$ **8**
Simplify: $y^2 + y - 4y + 3y^2$	$\mathbf{4y^2 - 3y}$
Simplify: $3(c + 2) - 2c$	$\mathbf{c + 6}$

OSEP Award# H324C030060

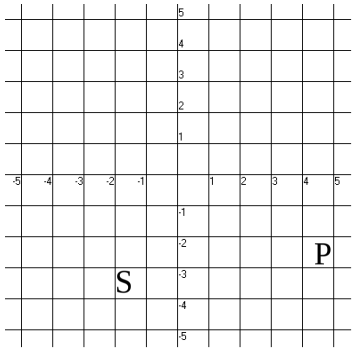
Solve: $3 \bullet 8 = m$	$m =$ **24**
Evaluate: $-9 + 5 + 8$	**4**
Simplify: $x + 2(x - 5) - 3$	$\mathbf{3x - 13}$
Solve: $d - 5 = 4$	$d =$ **9**
Simplify: $5(3 + f) - 2f + 6$	$\mathbf{3f + 21}$
Simplify: $5 - 2b + 4(b + 3)$	$\mathbf{2b + 17}$
Solve: 4 qts. = 1 gal. ____ qts. = 3 ¼ gals.	**13**
Simplify: $4(y + 1) - 8y$	$\mathbf{-4y + 4}$
Evaluate: $14 - 7 + (-3)$	**4**
Solve: $\frac{36}{6} = s$	$s =$ **6**
Simplify: $-3w^2 + 5w^2 - 5 + 12$	$\mathbf{2w^2 + 7}$
Simplify: $9 - 4(v + 2)$	$\mathbf{-4v + 1}$
Solve: $4r = 28$	$r =$ **7**
Simplify: $16 + 2(t - 4) - 3t$	$\mathbf{-t + 8}$
Simplify: $c - 3(c + 2) + 8$	$\mathbf{-2c + 2}$

Solve: $\frac{1.5}{3} = \frac{h}{9}$	$h =$ **4.5**
Simplify: $7b - 4 - 3 - 2b$	$\mathbf{5b - 7}$
Simplify: $2j - 3(j - 4)$	$\mathbf{-j + 12}$
Solve: $6 + 7 = v$	$v =$ **13**
Evaluate: $-5 + 6 - 6$	**–5**
Simplify: $4 + 10(1 - r)$	$\mathbf{-10r + 14}$
Solve: 2.5 cm. = 1 in. ____ cm. = 6 in.	**15**
Simplify: $6a + 2a - 9 + 3a^2$	$\mathbf{3a^2 + 8a - 9}$
Evaluate: $-1 + 4 + (-7)$	**–4**
Solve: $\frac{500}{j} = \frac{10}{2}$	$j =$ **100**
Simplify: $-3(u + 3) - 2u + 5$	$\mathbf{-5u - 4}$
Simplify: $2c - 3c - c$	$\mathbf{-2c}$
Solve: $h \div 6 = 8$	$h =$ **48**
Evaluate: $-2 + (-5) + (-8)$	**–15**
Simplify: $3z - 8z + 2 + 9$	$\mathbf{-5z + 11}$

OSEP Award# H324C030060

Find the ordered pair for each point:

P(,) S(,)



Fill in the empty box:

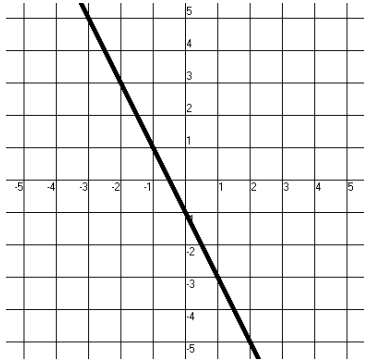
p	$2p \div 3$
6	
9	6
12	8
15	10

Fill in the empty box:

g	
-1	-1
1	3
3	7
5	11

Fill in the empty box:

j	$4j$
-1	-4
-3	-12
-5	
-7	-28



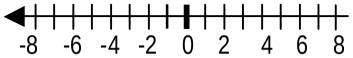
What is the slope?

What is the *y*-intercept?

Evaluate:
$1 + 4 \bullet 3$

If $r < 8$, two possible values for r are _____ and _____

Graph the expression $b \geq 3$



Write the expression for this phrase:
a number multiplied by 6

Simplify:
$8 - 3h + 2 + 5h$

Write a word phrase for this expression:
$7 - d$

Evaluate:
6^2

Solve:
$9 - 4 = w$
$w =$

Evaluate:
$(2 + 6)(-5)$

Evaluate $14 - 2g$ when

$g = 6$ _____

$g = -5$ _____

Write the expression for this phrase:
a number added to 5

Evaluate:
$\sqrt{9}$

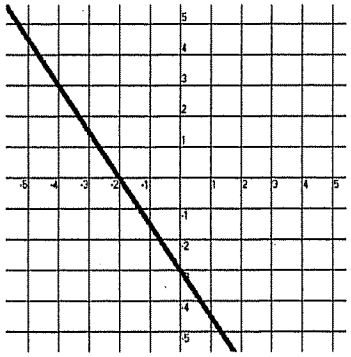
Write a word phrase for this expression:
$s \bullet 9$

Evaluate:
$10 \div 2 + 3 - 4$

Solve:
$4c = 32$
$c =$

If $(s \div 3) - 2 \geq 4$, two possible values for s are _____ and _____

OSEP Award# H324C030060



What is the slope?

What is the y-intercept?

Fill in the empty box:

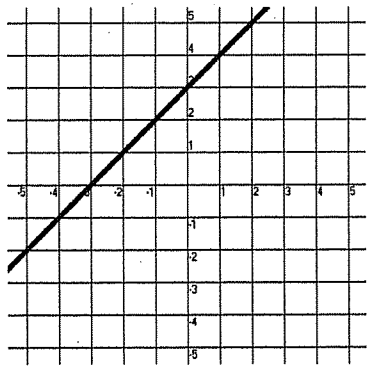
a	
-3	-10
3	-4
6	-1
9	2

Fill in the empty box:

w	$5w-3$
-2	-13
2	
4	17
8	37

Fill in the empty box:

d	
1	4
5	8
9	12
10	13



What is the slope?

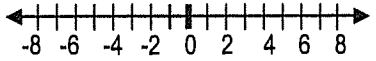
What is the y-intercept?

Simplify:
$6u + 3(u + 1) + 4$

Evaluate:
$12 \div (-4)$

Write the expression for this phrase:
10 less than a number

Graph the expression $d < -2$



Solve:
$9 + 5 = a$
$a =$

Write a word phrase for this expression:
$\frac{4}{b} - 8$

Evaluate:
$(-3)^3$

Simplify:
$4 + 2(s - 6)$

Evaluate $30 \div (2j)$ when

$j = 5$ _____

$j = 3$ _____

Evaluate:
$-15 \div (9 - 6)$

Simplify:
$(k + 9k) + 3k$

Write the expression for this phrase:
2 more than a number divided by 3

Write a word phrase for this expression:
$14 + c$

Solve:
$r \div 4 = 3$
$r =$

Evaluate:
$(9 - 5)^2 \bullet 2 \div 4$

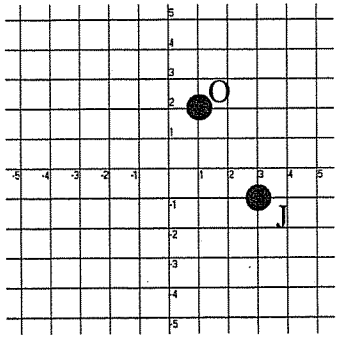
Evaluate $3r \div 2s$ when
$r = -6$ and $s = 3$

OSEP Award# H324C030060

Bill

Find the ordered pair for each point:

J(3 , 1) O(1 , 2)



Fill in the empty box:

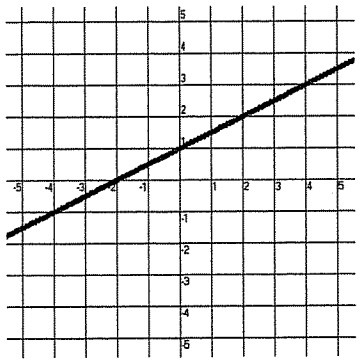
s	$3s$
6	18
7	21
8	24
9	27

Fill in the empty box:

n	$4n+7$
-1	3
-2	15
-3	-5
-4	-9

Fill in the empty box:

b	$b+3$
-2	-5
0	-3
3	0
5	2



What is the slope? 1/2

What is the y-intercept? 2

If $y > 9$, two possible values for y are 10 and 20

Evaluate:
$9 \cdot 4 - 6$

-18

Simplify:
$7f + (2f + f)$

10f

Solve:
$n + 3 = 8$
$n =$ 5

Evaluate $4b + 2$ when

$b = 1$ 6

$b = 3$ 14

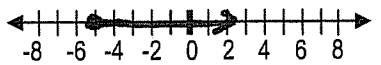
Write the expression for this phrase:
6 less than a number

6-x

Evaluate:
$(-2) \cdot (-4)$

8

Graph the expression $m > -5$



Write a word phrase for this expression:
$n + 9$ a number added to 9

Evaluate:
$4 + (9 \div 3) - 2^2$

3
7-4 3

Evaluate:
$(-2)^3$

8

Write the expression for this phrase:
9 multiplied by a number

9x

Evaluate $2x + 4y$ when
$x = 2$ and $y = -3$

16

Write a word phrase for this expression:
$10b - 7$ 10 times 7 minus a number

Evaluate $8g - 4$ when

$g = 2$ 12

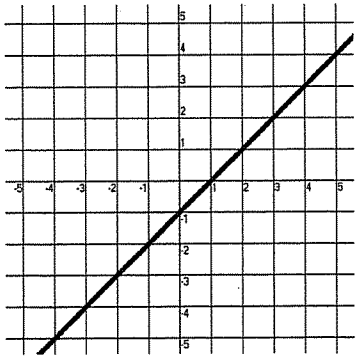
$g = -2$ 12

Simplify:
$6 - 2(b - 4)$

2b-14

OSEP Award# H324C030060

Bill



What is the slope? 1

What is the *y*-intercept? −1

Fill in the empty box:

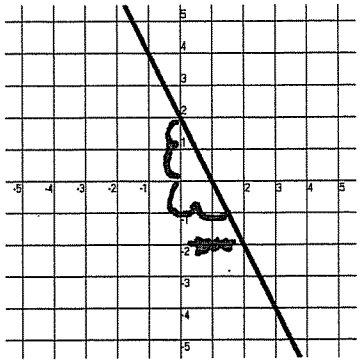
n	$n-2$
6	4
9	6
12	8
15	10

Fill in the empty box:

t	$2t-7$
-2	-11
2	-3
6	5
10	13

Fill in the empty box:

h	$h+7$
-5	2
1	8
5	12
10	17



What is the slope? −2

What is the *y*-intercept? 2

Write a word phrase for this expression:

$x \div 4$

a number divided by 4

Evaluate:

$(-12 \div 4) + 5$

8

Write the expression for this phrase:

8 more than twice a number

8 x 2n

Solve:

$15 - 8 = x$

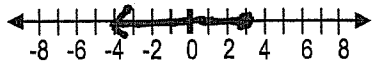
$x =$ 7

Evaluate:

4^2

8

Graph the expression $p \leq 3$



Simplify:

$9x - 3 + 4(x + 9)$

13x +6

Write the expression for this phrase:

10 divided by a number

If $2a + 4 < 20$, two possible values for a are _____ and _____

Solve:

$24 \div x = 6$

$x =$

Evaluate:

$10 - 3 + 8 \div 2$

Simplify:

$12n - 5 + 3 - 7n$

Write a word phrase for this expression:

$h \bullet 5$

Evaluate:

$(-3)(9 - 7)$

Evaluate:

$\sqrt{81}$

Solve:

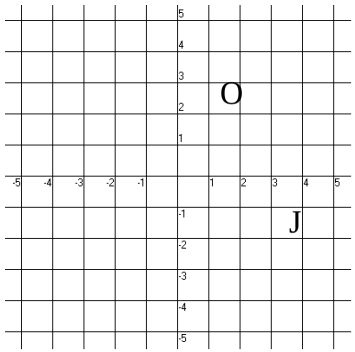
$6t = 36$

$t =$

OSEP Award# H324C030060

Find the ordered pair for each point:

J(**3 , – 1**) O(**1 , 2**)



Fill in the empty box:

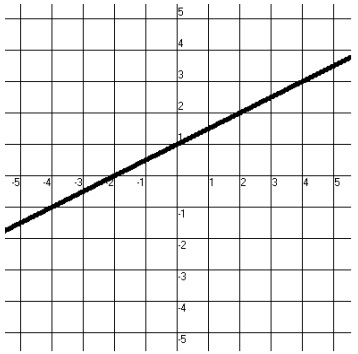
s	$3s$
6	18
7	21
8	**24**
9	27

Fill in the empty box:

n	$4n + 7$
-1	3
-2	**-1**
-3	-5
-4	-9

Fill in the empty box:

b	$b - 3$
-2	-5
0	-3
3	0
5	2



What is the slope?

What is the *y*-intercept? **1**

If $y > 9$, two possible values for y are _____ and _____

Any number greater than 9

Evaluate:
$9 \cdot 4 - 6$

30

Simplify:
$7f + (2f + f)$

10*f*

Solve:
$n + 3 = 8$
$n =$

5

Evaluate $4b + 2$ when

$b = 1$ **6**

$b = 3$ **14**

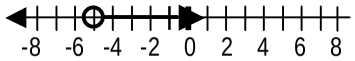
Write the expression for this phrase:
6 less than a number

***n* – 6**

Evaluate:
$(-2) \cdot (-4)$

8

Graph the expression $m > -5$



Write a word phrase for this expression:
$n + 9$

Nine more than a number

Evaluate:
$4 + (9 \div 3) - 2^2$

3

Evaluate:
$(-2)^3$

– 8

Write the expression for this phrase:
9 multiplied by a number

9*n*

Evaluate $2x + 4y$ when
$x = 2$ and $y = -3$

– 8

Write a word phrase for this expression:
$10b - 7$

Seven less than ten times a number

Evaluate $8g - 4$ when

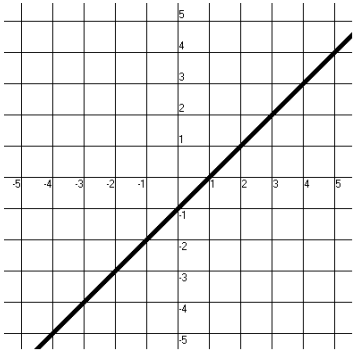
$g = 2$ **12**

$g = -2$ **– 20**

Simplify:
$6 - 2(b - 4)$

– 2*b* + 14

OSEP Award# H324C030060



What is the slope? **1**

What is the *y*-intercept? **– 1**

Fill in the empty box:

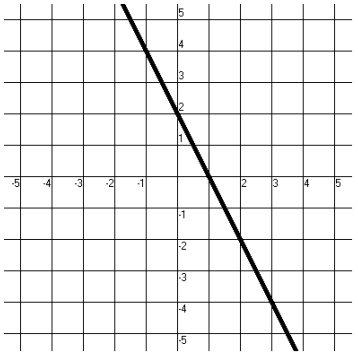
n	**$2n \div 3$**
6	4
9	6
12	8
15	10

Fill in the empty box:

t	$2t - 7$
-2	-11
2	-3
6	**5**
10	13

Fill in the empty box:

h	**$h + 7$**
-5	2
1	8
5	12
10	17



What is the slope? **– 2**

What is the *y*-intercept? **2**

Write a word phrase for this expression:
$x \div 4$

A number divided by four

Evaluate:
$(-12 \div 4) + 5$

2

Write the expression for this phrase:
8 more than twice a number

$2n + 8$

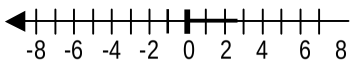
Solve:
$15 - 8 = x$
$x =$

7

Evaluate:
4^2

16

Graph the expression $p \leq 3$



Simplify:
$9x - 3 + 4(x + 9)$

$13x + 33$

Write the expression for this phrase:
10 divided by a number

$\frac{10}{n}$

If $2a + 4 < 20$, two possible values for a are _____ and _____

Any number less than 8

Solve:
$24 \div x = 6$
$x =$

4

Evaluate:
$10 - 3 + 8 \div 2$

11

Simplify:
$12n - 5 + 3 - 7n$

$5n - 2$

Write a word phrase for this expression:
$h \bullet 5$

A number multiplied by five

Evaluate:
$(-3)(9 - 7)$

– 6

Evaluate:
$\sqrt{81}$

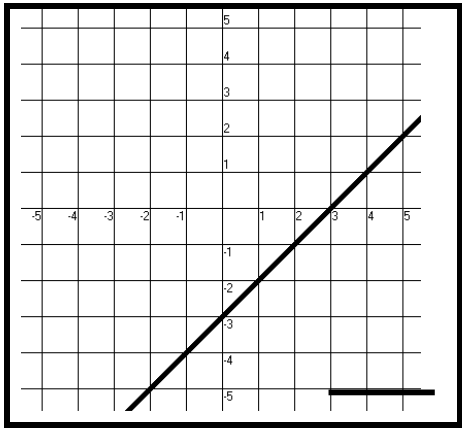
9

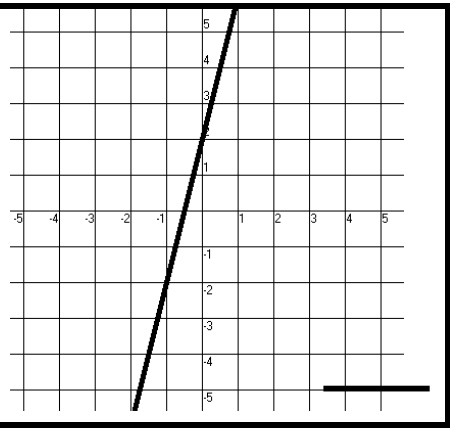
Solve:
$6t = 36$
$t =$

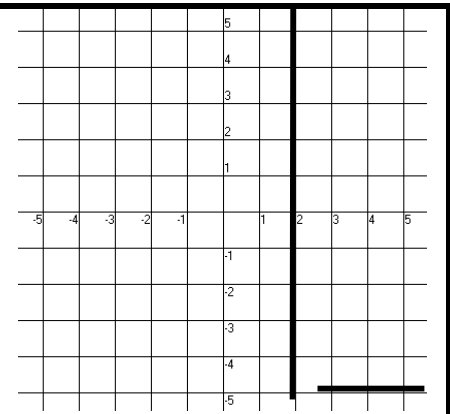
6

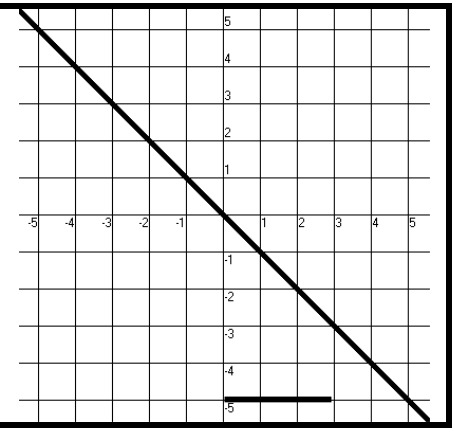
OSEP Award# H324C030060

A	**B**	**C**	**D**
$y = 4x + 2$	$y = x - 3$	$y = -x$	$x = 2$









x	y
4	-4
2	-2
0	0
-2	2
-4	4

x	y
2	4
2	2
2	0
2	-2
2	-4

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

x	y
4	18
2	10
0	2
-2	-6
-4	-14

x	y
4	1
2	-1
0	-3
-2	-5
-4	-7

Tim is collecting state quarters for his state. He started his collection with two quarters. He wants to trade in some dollar bills for quarters. Tim wrote this equation to show how many quarters he'll have after the trade.	
Leah is three years younger than her sister. She wrote this equation to show the relationship between their ages.	
Every time Joel gets home after curfew, he loses a chance to use the car. Joel wrote this equation to show the relationship between breaking curfew and his chances to use the car.	
Sam is planning a basketball tournament. He wrote this equation to show the relationship between the number of teams in the championship game and the total number of teams in the tournament.	
Teresa has taken four quizzes and gotten the same score on each one. She also has two extra credit points. Teresa wrote this equation to show how her total quiz points would be related to the score she gets on each quiz.	

OSEP Award# H324C030060

A

x	y
4	-9
2	-5
0	-1
-2	3
-4	7

B

x	y
4	15
2	3
0	-1
-2	3
-4	15

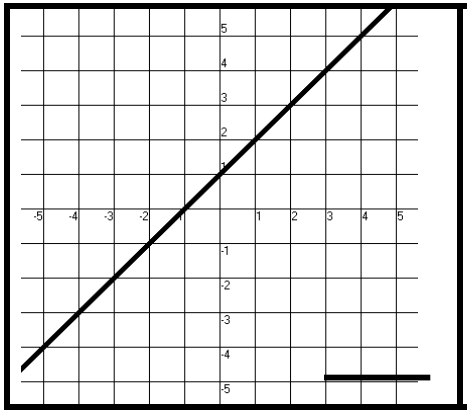
C

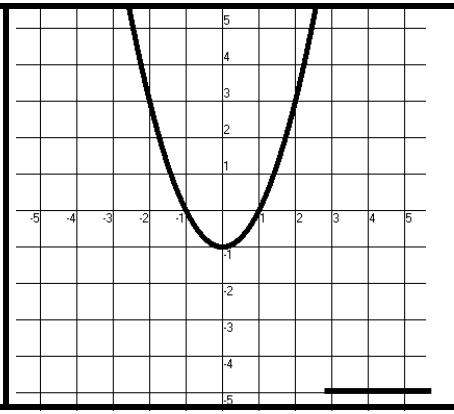
x	y
2	4
1	8
0	16
-1	32
-2	64

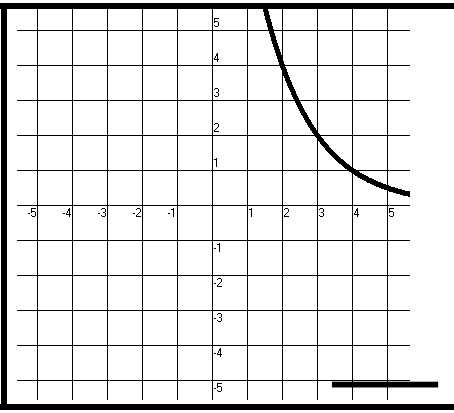
D

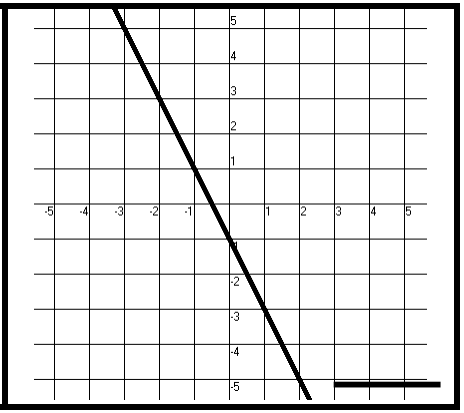
x	y
2	3
1	2
0	1
-1	0
-2	-1

$y = 16(.5)^x$ _____	$y = -2x - 1$ _____	$4y = -8x - 4$ _____	$y = x + 1$ _____	$y = x^2 - 1$ _____





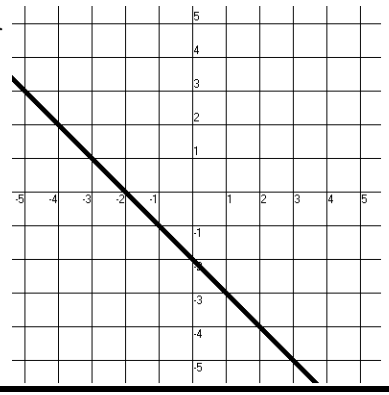




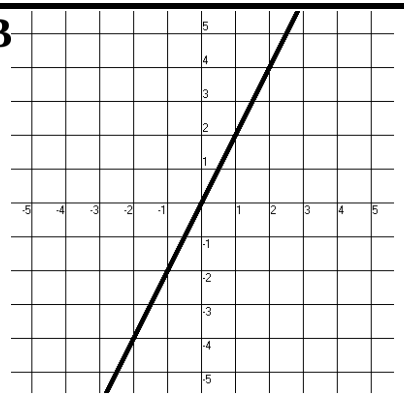
Pat is organizing the brackets for the doubles tennis tournament. Sixteen teams have entered. Pat made this data table to show how many teams will be left after each of the rounds.	_____
LeRoy needs to buy tile for a square room. The tiles come in 1-foot squares. There is a post in the middle of the room that is the same size as one tile. LeRoy made this data table to find how many tiles he will need.	_____
Elaine's mom gives her a list of chores to do each week. Before the week is over, she always finds one more thing that Elaine needs to do. Elaine made this data table to show the number of chores she does each week.	_____
When Maria eats hot lunch, it costs two dollars. She already owes her sister a dollar. Maria made this data table to find out how much less money she'll have each time she eats hot lunch.	_____
Ryan has a stool that is one foot tall. He made this data table to find the height of any person who stands on the stool.	_____

OSEP Award# H324C030060

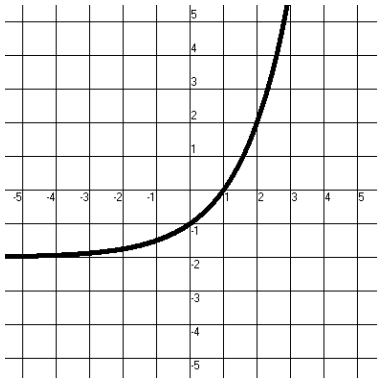
A



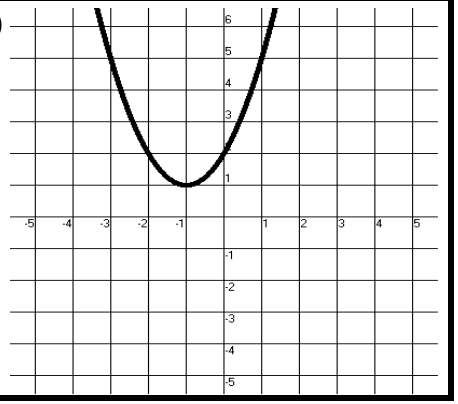
B



C



D



x	*y*
4	14
3	6
2	2
1	0
0	-1

x	*y*
4	8
2	4
0	0
-2	-4
-4	-8

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

x	*y*
2	-4
1	-3
0	-2
-1	-1
-2	0

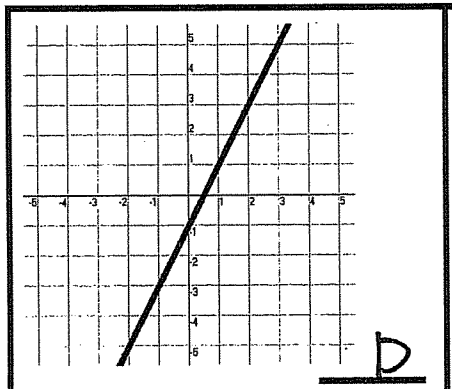
$y = x^2 + 2x + 2$ _____	$y = -x - 2$ _____	$y = 2x$ _____	$y = 2^x - 2$ _____	$y + 2 = 2^x$ _____

Bryan's dad will match his donation to the animal shelter. Brian made this graph to show the relationship between how much he gives and his total donation to the shelter.	_____
At the teachers' cookie swap, each teacher brings one cookie for all the teachers. The principal brings two cookies for each teacher. The cooks donate two cookies left from lunch. This graph shows the number of teachers and cookies.	_____
The class is planting trees for Earth Day. Each hole needs to be dug two feet deeper than the height of the root ball. This graph shows the relationship between the root ball's height and the level of the ground.	_____
Chris learned that a pair of mice will produce one litter of two baby mice and that when each baby matures, it will do the same. Chris made this graph to show the relationship between the generations and the total mice if the original two mice die.	_____
Jean changed jobs and doubled her hourly pay rate. This graph shows the relationship between Jean's old and new hourly pay rates.	_____

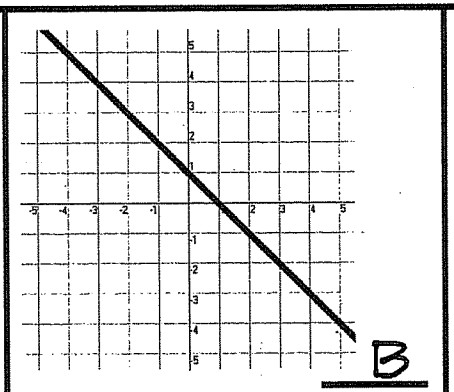
OSEP Award# H324C030060

Deshaun

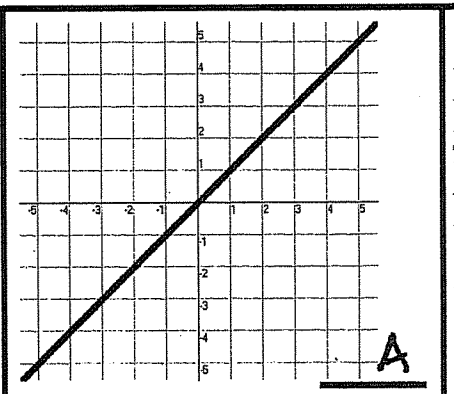
A	B	C	D
$y = x$	$y = 2x - 1$	$y = 1.5$	$y = -x + 1$



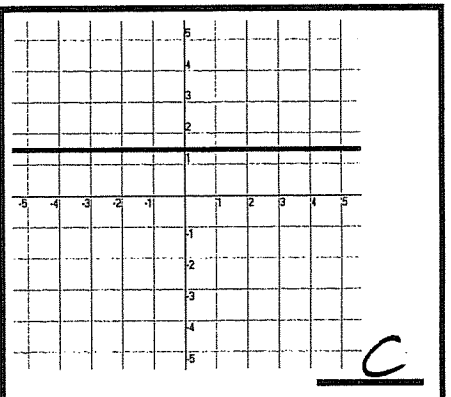
D



B



A



C

x	y
2	1.5
1	1.5
0	1.5
-1	1.5
-2	1.5

C

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

D

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

B

x	y
4	4
2	2
0	0
-2	-2
-4	-4

A

x	y
4	-3
2	-1
0	1
-2	3
-4	5

D

Mark needs to find half the width of pieces of pipe he is cutting to make a soccer goal. The width of the pipe is 3 inches. He wrote this equation to show the relationship between the length and the width of the pieces he will cut.	A
Every day that Cindy waters the garden, she earns a dollar. She wrote this equation to show the relationship between the number of days she waters the garden and the number of dollars she will earn.	A
Joe has one dollar in his wallet. He wrote this equation to show the relationship between the number of dollars he borrows from his friends for lunch and the total amount of money he has or owes.	D
The class earns $2 for each magazine subscription sold in the fund-raiser. A $1 fee per student is charged for a processing fee. Cindy wrote this equation to show the relationship between the number of magazines sold and the profit.	
The flood waters are receding at a rate of 1 foot per day. The river is currently at 1 foot above flood stage. Tom wrote this equation to show the relationship between the number of days and the height of the river compared to flood stage.	D

OSEP Award# H324C030060

Deshaun

A

x	y
4	16
2	4
0	0
-2	4
-4	16

B

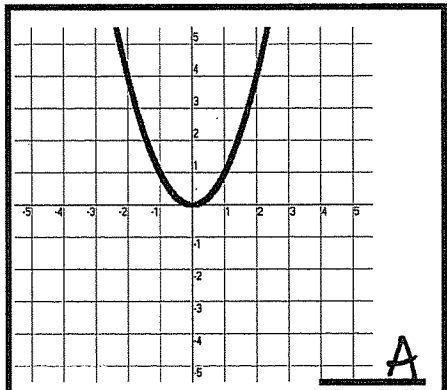
x	y
2	4
1	2
0	1
-1	$\frac{1}{2}$
-2	$\frac{1}{4}$

C

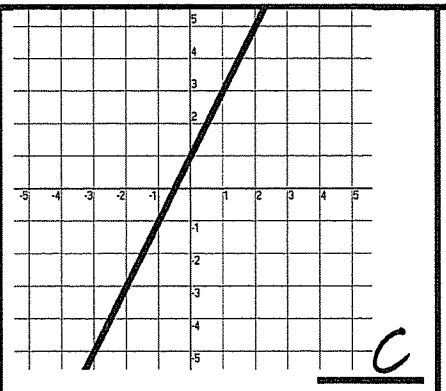
x	y
2	5
1	3
0	1
-1	-1
-2	-3

D

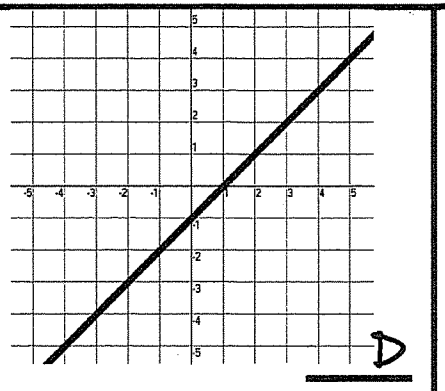
x	y
4	3
2	1
0	-1
-2	-3
-4	-5



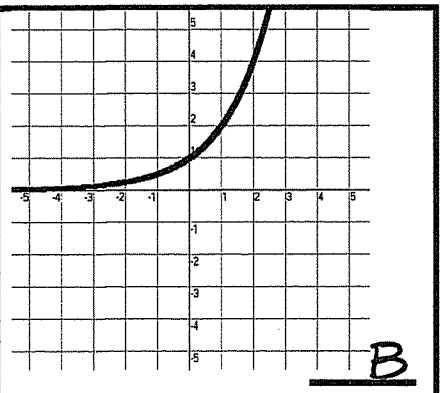
A



C



D



B

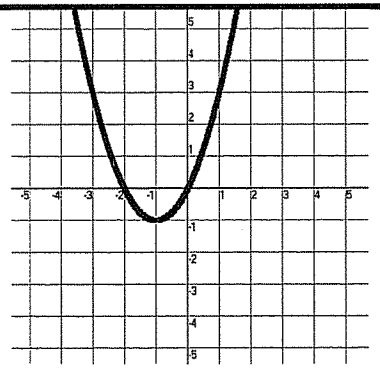
$y = 2x + 1$ C	$y = 2^x$ B	$y = x - 1$ D	$y = x^2$ B	$3y = 6x + 3$ A

Mr. Jones is going to give a true/false test. He made this data table to show the number of possible answer combinations his students can give on the test.	
Sue made this data table to figure out how many inches of wire she needs for a bracelet. Each bracelet uses two strands and she needs to add an extra inch to make a hook to fasten the bracelet.	C
Sam's allowance changes every year. Each month his mom pays him a dollar for each year he has lived, multiplied by his age. Sam made this data table to figure out his allowance.	B
Every time Hans delivers newspapers, he keeps one for his family. Hans made this data table to show how many newspapers he delivers to families on his route.	
Tim's washing machine 'eats' socks. The first time he lost one sock in the wash. Now, every time he washes a load of clothes, he loses two socks. Tim made this data table to figure out how many socks he has lost.	C

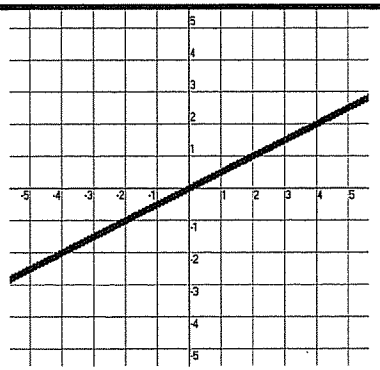
OSEP Award# H324C030060

Deshaun

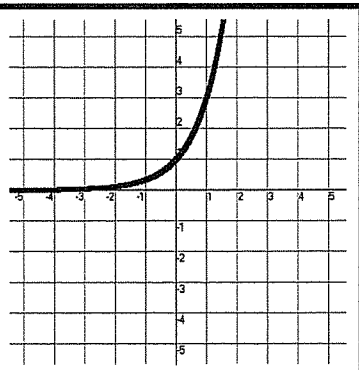
A



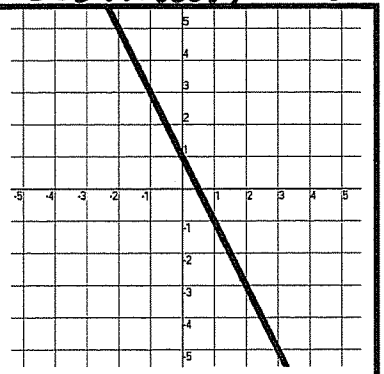
B



C



D



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

D

x	y
4	2
2	1
0	0
-2	-1
-4	-2

B

x	y
2	9
1	3
0	1
-1	$\frac{1}{3}$
-2	$\frac{1}{9}$

C

x	y
2	8
1	3
0	0
-1	-1
-2	0

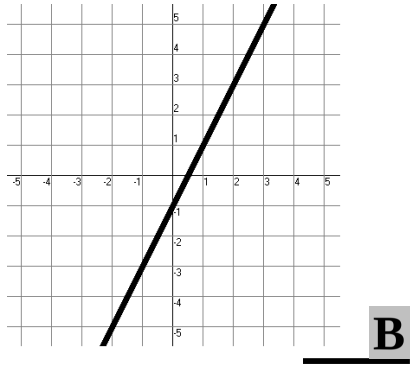
A

$y = -2x + 1$	$y = x^2 + 2x$ A	$y = 3^x$	$y = x(x+2)$ x^2+2x	$y = \frac{1}{2}x$ B

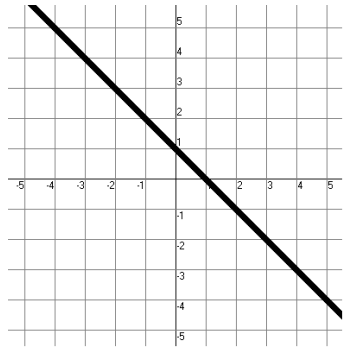
Matt built a maze for his gerbil. Each time the gerbil comes to an intersection, it can go three possible ways. Matt made this graph to show the total possible number of routes for the gerbil through the maze.	
LaShaya's mom makes her save half of what she earns in the summer for college. She made this graph to show how much money she will earn for her college fund this summer.	
A diving board is one foot above the surface of the pool. An average diver drops twice his height when he steps off the board. Marcus made this graph to show the diver's depth in the water.	
Ming Hui has two cats, Oscar and Otis. She knows that Oscar eats twice as much as Otis. She made this graph to show how much Otis eats.	
Tammy is making a backdrop for the school play. She needs to add on to a square piece of wood. The piece she will add is the same height as the square, but only 2 feet wide. Tammy made this graph to show the area of the backdrop.	

OSEP Award# H324C030060

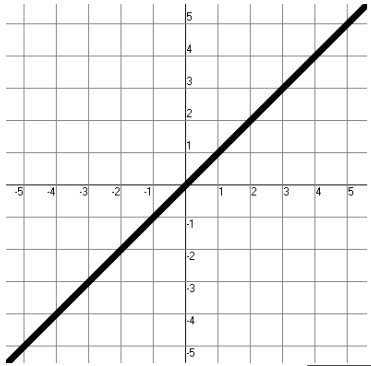
A	**B**	**C**	**D**
$y = x$	$y = 2x - 1$	$y = 1.5$	$y = -x + 1$



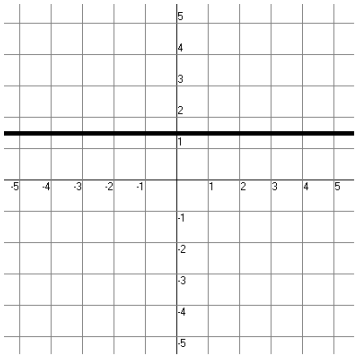
B



D



A



C

x	y	
2	1.5	
1	1.5	
0	1.5	**C**
-1	1.5	
-2	1.5	

x	y	
2	-1	
1	0	
0	1	**D**
-1	2	
-2	3	

x	y	
2	3	
1	1	
0	-1	**B**
-1	-3	
-2	-5	

x	y	
4	4	
2	2	
0	0	**A**
-2	-2	
-4	-4	

x	y	
4	-3	
2	-1	
0	1	**D**
-2	3	
-4	5	

Mark needs to find half the width of pieces of pipe he is cutting to make a soccer goal. The width of the pipe is 3 inches. He wrote this equation to show the relationship between the length and the width of the pieces he will cut.	**C**
Every day that Cindy waters the garden, she earns a dollar. She wrote this equation to show the relationship between the number of days she waters the garden and the number of dollars she will earn.	**A**
Joe has one dollar in his wallet. He wrote this equation to show the relationship between the number of dollars he borrows from his friends for lunch and the total amount of money he has or owes.	**D**
The class earns $2 for each magazine subscription sold in the fund-raiser. A $1 fee per student is charged for a processing fee. Cindy wrote this equation to show the relationship between the number of magazines sold and the profit.	**B**
The flood waters are receding at a rate of 1 foot per day. The river is currently at 1 foot above flood stage. Tom wrote this equation to show the relationship between the number of days and the height of the river compared to flood stage.	**D**

OSEP Award# H324C030060

A

x	y
4	16
2	4
0	0
-2	4
-4	16

B

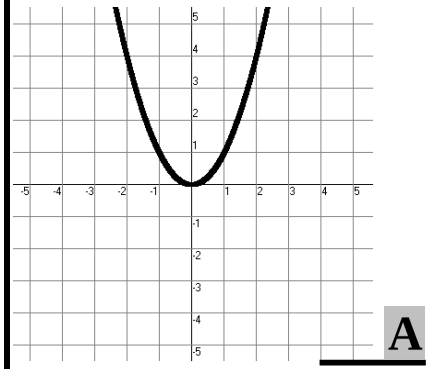
x	y
2	4
1	2
0	1
-1	$\frac{1}{2}$
-2	$\frac{1}{4}$

C

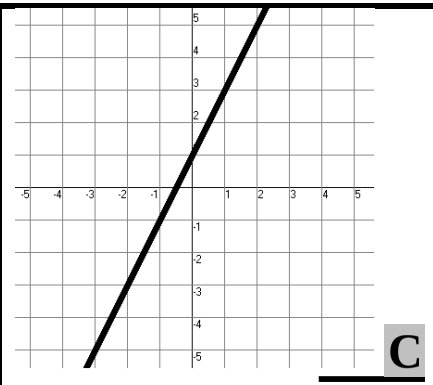
x	y
2	5
1	3
0	1
-1	-1
-2	-3

D

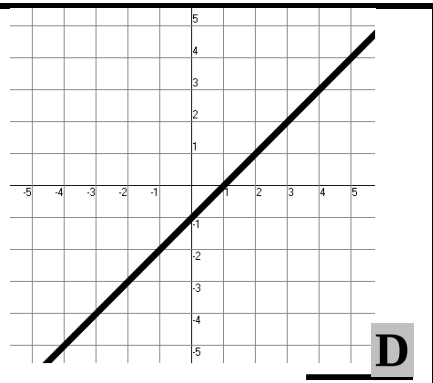
x	y
4	3
2	1
0	-1
-2	-3
-4	-5



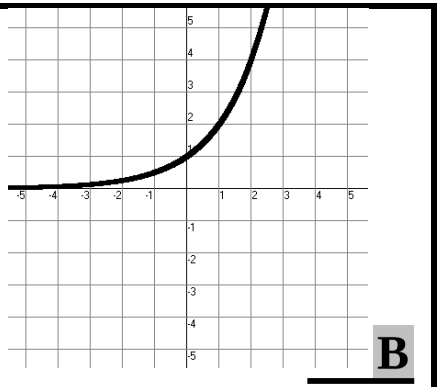
A



C



D



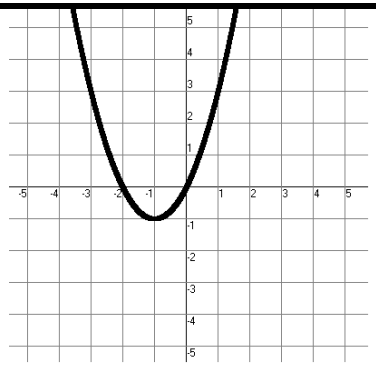
B

$y = 2x + 1$ **C**	$y = 2^x$ **B**	$y = x - 1$ **D**	$y = x^2$ **A**	$3y = 6x + 3$ **C**

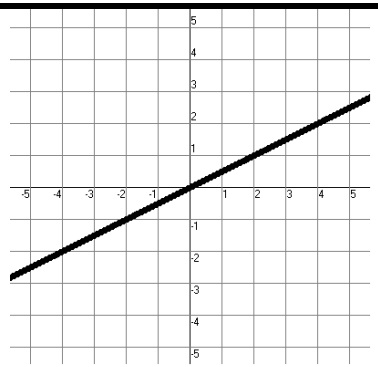
Mr. Jones is going to give a true/false test. He made this data table to show the number of possible answer combinations his students can give on the test.	**B**
Sue made this data table to figure out how many inches of wire she needs for a bracelet. Each bracelet uses two strands and she needs to add an extra inch to make a hook to fasten the bracelet.	**C**
Sam's allowance changes every year. Each month his mom pays him a dollar for each year he has lived, multiplied by his age. Sam made this data table to figure out his allowance.	**A**
Every time Hans delivers newspapers, he keeps one for his family. Hans made this data table to show how many newspapers he delivers to families on his route.	**D**
Tim's washing machine 'eats' socks. The first time he lost one sock in the wash. Now, every time he washes a load of clothes, he loses two socks. Tim made this data table to figure out how many socks he has lost.	**C**

OSEP Award# H324C030060

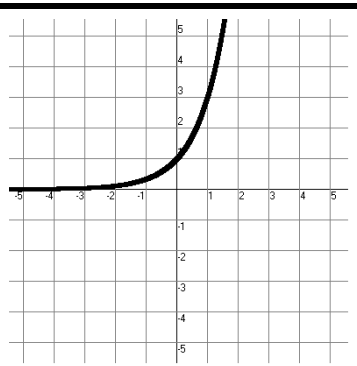
A



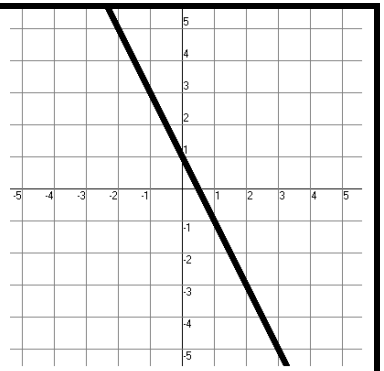
B



C



D



x	y	
2	-3	
1	-1	
0	1	**D**
-1	3	
-2	5	

x	y	
4	2	
2	1	
0	0	**B**
-2	-1	
-4	-2	

x	y	
2	9	
1	3	
0	1	**C**
-1	$\frac{1}{3}$	
-2	$\frac{1}{9}$	

x	y	
2	8	
1	3	
0	0	**A**
-1	-1	
-2	0	

$y = -2x + 1$ **D**	$y = x^2 + 2x$ **A**	$y = 3^x$ **C**	$y = x(x + 2)$ **A**	$y = \frac{1}{2}x$ **B**

Matt built a maze for his gerbil. Each time the gerbil comes to an intersection, it can go three possible ways. Matt made this graph to show the total possible number of routes for the gerbil through the maze.	**C**
LaShaya's mom makes her save half of what she earns in the summer for college. She made this graph to show how much money she will earn for her college fund this summer.	**B**
A diving board is one foot above the surface of the pool. An average diver drops twice his height when he steps off the board. Marcus made this graph to show the diver's depth in the water.	**D**
Ming Hui has two cats, Oscar and Otis. She knows that Oscar eats twice as much as Otis. She made this graph to show how much Otis eats.	**B**
Tammy is making a backdrop for the school play. She needs to add on to a square piece of wood. The piece she will add is the same height as the square, but only 2 feet wide. Tammy made this graph to show the area of the backdrop.	**A**

OSEP Award# H324C030060

Solve:
$9c - 4 = 14$
$c =$

a) $\frac{10}{9}$
b) 2
c) 1
d) – 2

Find the slope of a line through (2, 6), (9, – 8)

a) – 2
b) $\frac{3}{5}$
c) $\frac{1}{2}$
d) 2

Evaluate the expression:

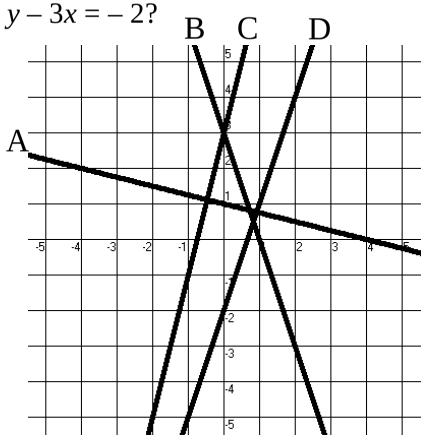
$(-2)^3$

a) $-\frac{1}{8}$
b) $\frac{1}{6}$
c) – 6
d) – 8

Write the equation of a line through (– 5, 5) (– 8, –1). Use point-slope form.

a) $y - 5 = 2(x - 5)$
b) $y - 5 = \frac{1}{2}(x + 5)$
c) $y - 5 = 2(x + 5)$
d) $y = 2x + 15$

Which line on the graph is $y - 3x = -2$?



a) Line A
b) Line B
c) Line C
d) Line D

Evaluate $(x^3 - 7) \div 4 + y$ when $x = 3$ and $y = 5$

a) 5
b) 11
c) 10
d) 1

Simplify:
$10u + 6 + u^2 - 5 - 5u$

a) $u^2 + 15u + 11$
b) $16u^2 + 1$
c) $16u + u^2$
d) $u^2 + 5u + 1$

Simplify:
$2(6 - 2a) + 5(6a + 3)$

a) $28a + 15$
b) $38a + 3$
c) $26a + 27$
d) $32a + 9$

OSEP Award# H324C030060

Write the equation in slope-intercept form if $m = \frac{2}{3}$ and $b = -1$

a) $y = -x + \frac{2}{3}$ b) $3y = 2x + 1$

c) $y = \frac{2}{3}x - 1$ d) $y = \frac{2}{3}x + 1$

Simplify the expression:

$$\frac{f^3 g}{f g^2} \bullet \frac{g^2}{f g^3}$$

a) $\frac{f^3 g^3}{f^3 g^5}$ b) $\frac{f}{g^2}$

c) $\frac{f^2}{f g^2}$ d) $\frac{f}{g}$

Solve the linear system:

$-x + y = -2$

$-2x - y = -7$

a) $(-3, 1)$
b) $(3, 1)$
c) $(1, -1)$
d) $(-2, 0)$

Solve:

$8x - 1 = -2x + 49$

$x =$

a) 6
b) $\frac{48}{10}$
c) 7
d) 5

Evaluate $-f + 5g^2 + 9$ when $f = 10$ and $g = 3$

a) 44
b) 49
c) 26
d) -5

Solve the linear system:

$3x + 2y = 6$

$5x + 4y = 8$

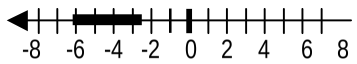
a) $(0, 3)$
b) $(1, -6)$
c) $(2, 0)$
d) $(4, -3)$

Simplify:

$6(5p - 1) - 5(-2p - 2)$

a) $40p + 4$
b) $40p - 16$
c) $3p - 3$
d) $20p - 4$

This graph shows the solution for which inequality?



a) $x > -2$
b) $2x \leq -4$
c) $3x < -6$
d) $x + 3 < 2$

OSEP Award# H324C030060

Emily

Solve:
$3x + 4 = 19$

$x =$ -4 -4

$3x = 15$

$x = 5$

a) 8
b) 22
c) 15
d) 5

Evaluate $a^2 - b \div 2$ when $a = 4$ and $b = 6$

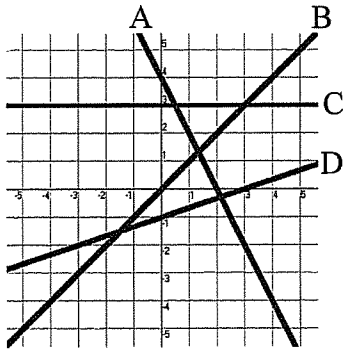
$4^2 - 6 \div 2$

$8 - 6 \div 2$

$8 - 3$

a) 1
b) 5
c) 10
d) 13

Which line on the graph is $y + 2x = 4$?



a) Line A
b) Line B
c) Line C
d) Line D

Simplify:
$3(m + 2) + 2(m - 1)$

$3m + 6 + 2m - 1$

$5m + 5$

a) $5m + 4$
b) $5m + 1$
c) $6m + 8$
d) $6m - 8$

Evaluate the expression:

6^{-2}

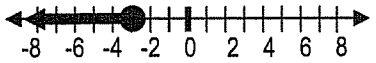
-36

a) -36
b) $\frac{1}{36}$
c) $\frac{1}{12}$
d) -12

Solve the linear system:
$x - y = 4$
$x + 2y = 19$

a) $(-1, -5)$
b) $(5, 8)$
c) $(-2, 19)$
d) $(9, 5)$

This graph shows the solution for which inequality?



$x \leq -3$

a) $x > -3$
b) $2x \leq -6$
c) $-3x > 9$
d) $3x \geq 9$

Write the equation in slope-intercept form if $m = \frac{1}{2}$ and $b = 3$

$y = mx + b$

$y = \frac{1}{2}x + 3$

a) $y = 2x + 3$
b) $y = 3x + \frac{1}{2}$
c) $x = \frac{1}{2}y - 3$
d) $y = \frac{1}{2}x + 3$

OSEP Award# H324C030060

Emily

Evaluate $d + 3c^2$ when $d = 5$ and $c = 2$

$5 + 3 \cdot 2^2$

$5 + 6^2$

$5 + 36$

a) 11
b) 23
c) 17
d) 10

Solve:
$6c + 4 = -3c - 14$

$c =$ -4 -4

$6c = -3c - 18$

$+3c \quad +3c$

$9c = -18$

$c = 2$

a) $-\frac{10}{3}$
b) -2
c) 2
d) 6

Find the slope of a line through
(1, – 1) (5, 2)

a) $\frac{1}{5}$ b) $\frac{3}{4}$
c) -6 d) $-\frac{4}{3}$

Simplify:
$6(2b - 3) - 3(2 - b)$

$12b - 18 - 6 - 3b$

$9b - 24$

a) $15b - 24$
b) $9b - 9$
c) $9b + 12$
d) $15b + 12$

Simplify the expression:

$$\frac{a^2}{ab^3} \cdot \frac{b^4}{a^3}$$

a) $\frac{a^8}{a^3b^3}$ b) $\frac{ab^8}{a^4b^3}$
c) $\frac{b}{a^2}$ d) $\frac{b}{a}$

Solve the linear system:
$-6x + 3y = -6$
$2x + 6y = 30$

a) (6, 3)
b) (3, 4)
c) (2, 6)
d) (4, – 3)

Simplify:
$b^2 - 4b + 2b^2 + 7 - 5$

$3b^2 - 4b + 12$

a) $3b^2 - 4b + 2$
b) $2b + 2$
c) $-b^2 - 4b + 12$
d) $3b^2 - 4b + 12$

Write the equation of a line through
(5, 3) (4, 9). Use point-slope form.

a) $y + 1 = 2(x - 4)$
b) $y + 4 = -6(x - 1)$
c) $y - 3 = -6(x - 5)$
d) $y = -6x + 30$

OSEP Award# H324C030060

Solve:
$3x + 4 = 19$
$x =$

Isolates variables by subtracting 4 from each side
$3x = 15$

Isolates variable and divides by 3 to solve for x

a) 8
b) 22
c) 15
d) 5

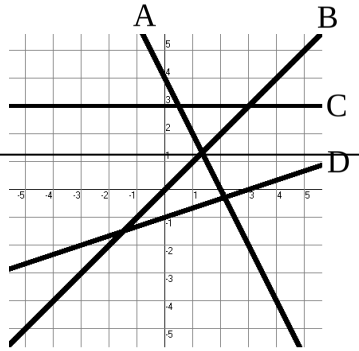
Evaluate $a^2 - b \div 2$ when
$a = 4$ and $b = 6$

Substitutes values for variables
$4^2 - 6 \div 2$
$16 - 6 \div 2$
$16 - 6 = 10$
$10 \div 2$

Further reduces elements in the expression
$16 - 3$

a) 1
b) 5
c) 10
d) 13

Which line on the graph is
$y + 2x = 4$?
$y = -2x + 4$



a) Line A
b) Line B
c) Line C
d) Line D

Simplify:
$3(m + 2) + 2(m - 1)$

Distributes either term so that response includes
$3m + 6$
<u>OR</u> $2m - 2$
<u>OR</u> $5m$

Distributes both terms correctly
$3m + 6 + 2m - 2$

<u>OR</u> Distributes either term correctly <u>and</u> includes 5m or + 4 in response

a) $5m + 4$
b) $5m + 1$
c) $6m + 8$
d) $6m - 8$

Evaluate the expression:

6^{-2}

Applies the negative exponent
$\frac{1}{6^2}$

a) – 36
b) $\frac{1}{36}$
c) $\frac{1}{12}$
d) – 12

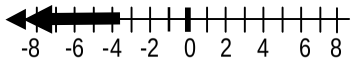
Solve the linear system:
$x - y = 4$
$x + 2y = 19$

Chooses a correct multiplier for combination (i.e.,multiply 1st equation by 2 or -1 or 2nd eq. by -1)
<u>OR</u> Isolates one variable (x = , y =) for substitution

Solves correctly for 1 variable using either method <u>OR</u> follows steps to solve, but makes computational errors <u>OR</u> plugs in solution for 1 variable if using substitution

a) (– 1, – 5)
b) (5, 8)
c) (– 2, 19)
d) (9, 5)

This graph shows the solution for which inequality?



$x \leq -3$

Shows evidence of understanding simplifying of inequalities by dividing answer options to isolate variables

a) $x > -3$
b) $2x \leq -6$
c) $-3x > 9$
d) $3x \geq 9$

Write the equation in slope-intercept form if $m = \frac{1}{2}$ and $b = 3$

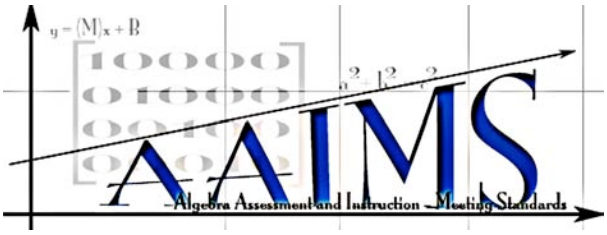
$y = mx + b$
<u>OR</u> an expression that includes $\frac{1}{2}x$

$\frac{1}{2}x + 3$ (but no 'y = ')

a) $y = 2x + 3$
b) $y = 3x + \frac{1}{2}$
c) $x = \frac{1}{2}y - 3$
d) $y = \frac{1}{2}x + 3$

Evaluate $d + 3c^2$ when $d = 5$ and $c = 2$ *Substitutes values for variables* *$5 + 3 \cdot 2^2$* *Further reduces elements in the expression* *$5 + 3 \cdot 4$* *$5 + 12$* a) 11 b) 23 **c) 17** d) 10	Solve: $6c + 4 = -3c - 14$ $c =$ *Isolates variables on 1 side (+ 3c or – 6c to both sides)* *OR Isolates constants on 1 side (– 4 or + 14 to both sides)* *Isolates constants and variables* *OR Isolates variables or constants and divides to solve for c* a) $-\frac{10}{3}$ **b) – 2** c) 2 d) 6	Find the slope of a line through $(1, -1)$ $(5, 2)$ *Draws a graph to determine slope* *OR uses slope formula* $\frac{2-{}^{-}1}{5-1}$ *or* $\frac{{}^{-}1-2}{1-5}$ *Finds slope, but has negative values in numerator and denominator* $\frac{{}^{-}3}{{}^{-}4}$ a) $\frac{1}{5}$ **b) $\frac{3}{4}$** c) – 6 d) $-\frac{4}{3}$	[24] Simplify: $6(2b - 3) - 3(2 - b)$ *Distributes either term so that response includes* *$12b - 18$* *OR $- 6 + 3b$* *OR $15b$* *Distributes both terms correctly* *$12b - 18 - 6 + 3b$* *OR Distributes either term correctly and includes 15b or – 24 in response* **a) $15b - 24$** b) $9b - 9$ c) $9b + 12$ d) $15b + 12$
Simplify the expression: $\frac{a^2}{ab^3} \cdot \frac{b^4}{a^3}$ *Multiplies across to combine terms OR simplifies by reducing either the a or b terms* *EX:* $\frac{a^2b^4}{a^4b^3}$ *or* $\frac{a}{b^3} \cdot \frac{b^4}{a^3}$ *Simplifies both the a and b terms, but expression is not fully reduced* *EX:* $a \cdot \frac{b}{a^3}$ a) $\frac{a^8}{a^3b^3}$ b) $\frac{ab^8}{a^4b^3}$ **c) $\frac{b}{a^2}$** d) $\frac{b}{a}$	Solve the linear system: $-6x + 3y = -6$ $2x + 6y = 30$ *Chooses a correct multiplier for combination (i.e., multiplies1st equation by – 2 or 2nd eq. by 3)* *OR Isolates one variable (x = , y =) for substitution* *Solves correctly for 1 variable using either method OR follows steps to solve, but makes computational errors OR plugs in solution for 1 variable if using substitution* a) (6, 3) **b) (3, 4)** c) (2, 6) d) (4, -3)	Simplify $b^2 - 4b + 2b^2 + 7 - 5$ *Combines any 2 like terms (i.e., b^2, constants)* *$3b^2$ OR 2* *Combines both like terms, but makes an error in computation* *EX: $3b^2 - 4b + 12$* **a) $3b^2 - 4b + 2$** b) $2b + 2$ c) $-b^2 - 4b + 12$ d) $3b^2 - 4b + 12$	Write the equation of a line through $(5, 3)$ $(4, 9)$. Use point-slope form. *Determines correct slope* *OR applies slope formula* $\frac{9-3}{4-5}$ *or* $\frac{3-9}{5-4}$ *or m = - 6* *Uses correct slope and one other aspect of point-slope formula,* *EX: $y - 3 = -6(x - \square)$* *$y - 9 = -6(x - \square)$* *$y - \square = -6(x - 4)$* *$y - \square = -6(x - 5)$* a) $y + 1 = 2(x - 4)$ b) $y + 4 = -6(x - 1)$ **c) $y - 3 = -6(x - 5)$** d) $y = -6x + 30$

OSEP Award# H324C030060



Project AAIMS
Probe Scoring Summary Sheet

For all probe types, ignore skipped problems

Algebra Basic Skills probes:

- Each correct problem is worth 1 point
- Count mathematically equivalent responses as correct
- TOTAL SCORE = number of problems correct

Algebra Foundations probes:

- Each correct response/blank is worth 1 point
- Each ordered pair is counted as one point (the box with two ordered pairs is worth TWO points, not four)
- Count mathematically equivalent responses as correct
- TOTAL SCORE = total number of points earned

Translations probes:

- Count the number of problems correct
- Count the number of problems incorrect
- TOTAL SCORE = number of problems correct – number of problems incorrect

Algebra Content Analysis probes:

- Use the three-step partial credit scoring procedure:
    1. Is the answer correct? Score as 3 points
    2. Is the answer incorrect with no work shown? Score as a guess and mark a √ in the box. When totaling, count as -1
    3. If work is shown, but no answer or answer is incorrect, compare the student's response to the scoring rubric.
        - If the student's answer has features that match what is ABOVE the line on the rubric, score as 1 point
        - If the student's answer has features that match what is BELOW the line on the rubric, score as 2 points
        - If the student's work does NOT align with anything on the rubric, score as 0 points
- TOTAL SCORE = total number of points earned (e.g., total positive points - # of guesses)

Max

Solve: $9 + a = 15$	$a =$ 6
Evaluate: $12 + (-8) + 3$	7
Simplify: $2x + 4 + 3x + 5$	$5x+9$
Solve: $12 - k = 4$	$k =$ 8
Simplify: $4(3 + s) - 7$	$5+5$
Simplify: $b + b + 2b$	$4b$
Solve: $\frac{r}{6} = \frac{12}{18}$	$r =$ 2
Simplify: $7 - 3(f - 2)$ $-3f \div 6$	$-3f+1$
Evaluate: $-5 + (-4) - 1$	-10
Solve: $63 \div c = 9$	$c =$ 7
Simplify: $2(s - 1) + 4 + 5s$ $2s-2$	$7s+6$
Simplify: $8m - 9(m + 2)$	$-m+18$
Solve: 3 ft. = 1 yd. ____ ft. = 9 yds.	27
Evaluate: $4 - (-2) + 8$	10
Simplify: $2k + 3 - 5(k + 7)$	$3k+10$

Solve: $10 - 6 = g$	$g =$ 4
Simplify: $9 - 4d + 2 + 7d$	$3d+11$
Simplify: $5(b - 3) - b$	$-15+4b$
Solve: $q \cdot 5 = 30$	$q =$ 6
Evaluate: $8 - (-6) - 4$	10
Simplify: $2 + w(w - 5)$	$2w-3$
Solve: 1 ft. =12 in. 5 ft. = ____ in.	60
Simplify: $4 - 7b + 5(b - 1)$	$9-2b$
Simplify: $s + 2s - 4s$	5
Solve: $x + 4 = 7$	$x =$ 3
Simplify: $-5(q + 3) + 9$	
Evaluate: $9 + (-3) - 8$	
Solve: $\frac{12}{2} = \frac{48}{m}$	$m =$ 8
Simplify: $y^2 + y - 4y + 3y^2$	
Simplify: $3(c + 2) - 2c$	$c+6$

OSEP Award# H324C030060

Max

Solve: $3 \cdot 8 = m$	$m =$ 24
Evaluate: $-9+5+8$	4
Simplify: $x+2(x-5)-3$	
Solve: $d-5=4$	$d =$ 9
Simplify: $5(3+f)-2f+6$	
Simplify: $5-2b+4(b+3)$	
Solve: 4 qts. = 1 gal. ____ qts. = 3 ¼ gals.	
Simplify: $4(y+1)-8y$	
Evaluate: $14-7+(-3)$	
Solve: $\frac{36}{6}=s$	$s =$
Simplify: $-3w^2+5w^2-5+12$	
Simplify: $9-4(v+2)$	
Solve: $4r=28$	$r =$ 7
Simplify: $16+2(t-4)-3t$	
Simplify: $c-3(c+2)+8$	

Solve: $\frac{1.5}{3}=\frac{h}{9}$	$h =$
Simplify: $7b-4-3-2b$	
Simplify: $2j-3(j-4)$	
Solve: $6+7=v$	$v =$ 13
Evaluate: $-5+6-6$	-5
Simplify: $4+10(1-r)$	
Solve: 2.5 cm. = 1 in. ____ cm. = 6 in.	
Simplify: $6a+2a-9+3a^2$	
Evaluate: $-1+4+(-7)$	
Solve: $\frac{500}{j}=\frac{10}{2}$	$j =$ 100
Simplify: $-3(u+3)-2u+5$	
Simplify: $2c-3c-c$	-2c
Solve: $h \div 6 = 8$	$h =$ 48
Evaluate: $-2+(-5)+(-8)$	
Simplify: $3z-8z+2+9$	

OSEP Award# H324C030060

Solve: $9 + a = 15$	$a =$ **6**
Evaluate: $12 + (-8) + 3$	**7**
Simplify: $2x + 4 + 3x + 5$	$\mathbf{5x + 9}$
Solve: $12 - k = 4$	$k =$ **8**
Simplify: $4(3 + s) - 7$	$\mathbf{4s + 5}$
Simplify: $b + b + 2b$	$\mathbf{4b}$
Solve: $\frac{r}{6} = \frac{12}{18}$	$r =$ **4**
Simplify: $7 - 3(f - 2)$	$\mathbf{-3f + 13}$
Evaluate: $-5 + (-4) - 1$	**– 10**
Solve: $63 \div c = 9$	$c =$ **7**
Simplify: $2(s - 1) + 4 + 5s$	$\mathbf{7s + 2}$
Simplify: $8m - 9(m + 2)$	$\mathbf{-m - 18}$
Solve: 3 ft. = 1 yd. ____ ft. = 9 yds.	**27**
Evaluate: $4 - (-2) + 8$	**14**
Simplify: $2k + 3 - 5(k + 7)$	$\mathbf{-3k - 32}$

Solve: $10 - 6 = g$	$g =$ **4**
Simplify: $9 - 4d + 2 + 7d$	$\mathbf{3d + 11}$
Simplify: $5(b - 3) - b$	$\mathbf{4b - 15}$
Solve: $q \cdot 5 = 30$	$q =$ **6**
Evaluate: $8 - (-6) - 4$	**10**
Simplify: $2 + w(w - 5)$	$\mathbf{w^2 - 5w + 2}$
Solve: 1 ft.=12 in. 5 ft.= ____ in.	**60**
Simplify: $4 - 7b + 5(b - 1)$	$\mathbf{-2b - 1}$
Simplify: $s + 2s - 4s$	$\mathbf{-s}$
Solve: $x + 4 = 7$	$x =$ **3**
Simplify: $-5(q + 3) + 9$	$\mathbf{-5q - 6}$
Evaluate: $9 + (-3) - 8$	**– 2**
Solve: $\frac{12}{2} = \frac{48}{m}$	$m =$ **8**
Simplify: $y^2 + y - 4y + 3y^2$	$\mathbf{4y^2 - 3y}$
Simplify: $3(c + 2) - 2c$	$\mathbf{c + 6}$

OSEP Award# H324C030060

Solve: $3 \bullet 8 = m$	$m =$ **24**
Evaluate: $-9 + 5 + 8$	**4**
Simplify: $x + 2(x - 5) - 3$	$\mathbf{3x - 13}$
Solve: $d - 5 = 4$	$d =$ **9**
Simplify: $5(3 + f) - 2f + 6$	$\mathbf{3f + 21}$
Simplify: $5 - 2b + 4(b + 3)$	$\mathbf{2b + 17}$
Solve: 4 qts. = 1 gal. ____ qts. = 3 ¼ gals.	**13**
Simplify: $4(y + 1) - 8y$	$\mathbf{-4y + 4}$
Evaluate: $14 - 7 + (-3)$	**4**
Solve: $\frac{36}{6} = s$	$s =$ **6**
Simplify: $-3w^2 + 5w^2 - 5 + 12$	$\mathbf{2w^2 + 7}$
Simplify: $9 - 4(v + 2)$	$\mathbf{-4v + 1}$
Solve: $4r = 28$	$r =$ **7**
Simplify: $16 + 2(t - 4) - 3t$	$\mathbf{-t + 8}$
Simplify: $c - 3(c + 2) + 8$	$\mathbf{-2c + 2}$

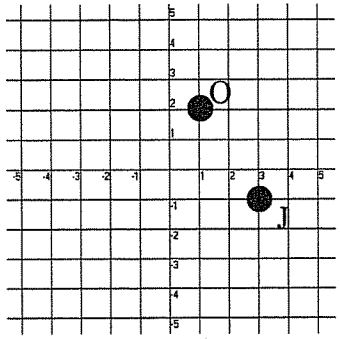
Solve: $\frac{1.5}{3} = \frac{h}{9}$	$h =$ **4.5**
Simplify: $7b - 4 - 3 - 2b$	$\mathbf{5b - 7}$
Simplify: $2j - 3(j - 4)$	$\mathbf{-j + 12}$
Solve: $6 + 7 = v$	$v =$ **13**
Evaluate: $-5 + 6 - 6$	**–5**
Simplify: $4 + 10(1 - r)$	$\mathbf{-10r + 14}$
Solve: 2.5 cm. = 1 in. ____ cm. = 6 in.	**15**
Simplify: $6a + 2a - 9 + 3a^2$	$\mathbf{3a^2 + 8a - 9}$
Evaluate: $-1 + 4 + (-7)$	**–4**
Solve: $\frac{500}{j} = \frac{10}{2}$	$j =$ **100**
Simplify: $-3(u + 3) - 2u + 5$	$\mathbf{-5u - 4}$
Simplify: $2c - 3c - c$	$\mathbf{-2c}$
Solve: $h \div 6 = 8$	$h =$ **48**
Evaluate: $-2 + (-5) + (-8)$	**–15**
Simplify: $3z - 8z + 2 + 9$	$\mathbf{-5z + 11}$

OSEP Award# H324C030060

Max

Find the ordered pair for each point:

J(1 , 2) O(3 , -1)



Fill in the empty box:

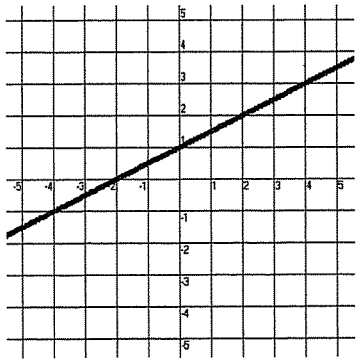
s	$3s$
6	18
7	21
8	24
9	27

Fill in the empty box:

n	$4n+7$
-1	3
-2	-1
-3	-5
-4	-9

Fill in the empty box:

b	$b-3$
-2	-5
0	-3
3	0
5	2



What is the slope? 2

What is the y-intercept? 1

If $y > 9$, two possible values for y are 25 and 200

Evaluate:
$9 \cdot 4 - 6$

-18

Simplify:
$7f + (2f + f)$

10f

Solve:
$n + 3 = 8$
$n =$ 5

Evaluate $4b + 2$ when

$b = 1$ 6

$b = 3$ 14

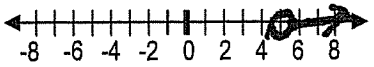
Write the expression for this phrase:
6 less than a number

n-6

Evaluate:
$(-2) \cdot (-4)$

8

Graph the expression $m > -5$



Write a word phrase for this expression:
$n + 9$

9 added to a number

Evaluate:
$4 + (9 \div 3) - 2^2$

4 3 -4 3

Evaluate:
$(-2)^3$

-6

Write the expression for this phrase:
9 multiplied by a number

9x

Evaluate $2x + 4y$ when
$x = 2$ and $y = -3$

-8

Write a word phrase for this expression:
$10b - 7$

Evaluate $8g - 4$ when

$g = 2$ 12

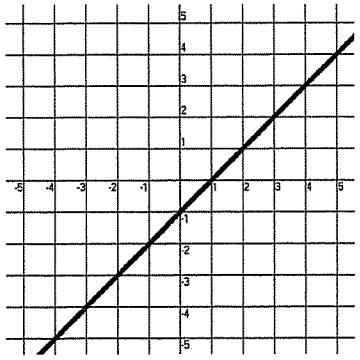
$g = -2$ -12

Simplify:
$6 - 2(b - 4)$

-2b-8 -2b-2

OSEP Award# H324C030060

Max



What is the slope? 1

What is the y-intercept? -1

Fill in the empty box:

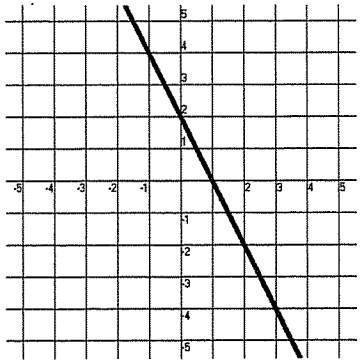
n	$n-2$
6	4
9	6
12	8
15	10

Fill in the empty box:

t	$2t-7$
-2	-11
2	-3
6	5
10	13

Fill in the empty box:

h	$h+7$
-5	2
1	8
5	12
10	17



What is the slope? -2

What is the y-intercept? 2

Write a word phrase for this expression:
$x \div 4$ a number divided by 4

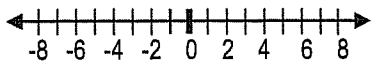
Evaluate:
$(-12 \div 4) + 5$
2

Write the expression for this phrase:
8 more than twice a number
$8+2n$

Solve:
$15 - 8 = x$
$x =$ 7

Evaluate:
4^2
16

Graph the expression $p \leq 3$



Simplify:
$9x - 3 + 4(x + 9)$

Write the expression for this phrase:
10 divided by a number

If $2a + 4 < 20$, two possible values for a are _____ and _____

Solve:
$24 \div x = 6$
$x =$ 4

Evaluate:
$10 - 3 + 8 \div 2$

Simplify:
$12n - 5 + 3 - 7n$

Write a word phrase for this expression:
$h \bullet 5$

Evaluate:
$(-3)(9 - 7)$

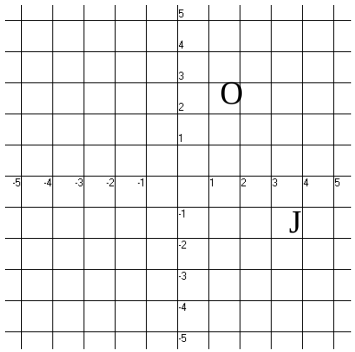
Evaluate:
$\sqrt{81}$
9

Solve:
$6t = 36$
$t =$ 6

OSEP Award# H324C030060

Find the ordered pair for each point:

J(**3 , – 1**) O(**1 , 2**)



Fill in the empty box:

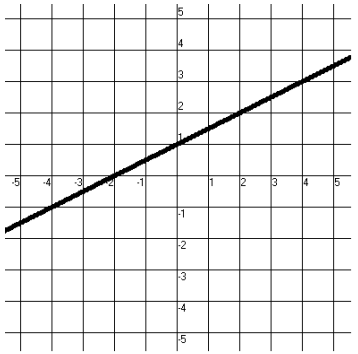
s	$3s$
6	18
7	21
8	**24**
9	27

Fill in the empty box:

n	$4n + 7$
-1	3
-2	**-1**
-3	-5
-4	-9

Fill in the empty box:

b	$b - 3$
-2	-5
0	-3
3	0
5	2



What is the slope?

What is the *y*-intercept? **1**

If $y > 9$, two possible values for y are _____ and _____

Any number greater than 9

Evaluate:
$9 \cdot 4 - 6$

30

Simplify:
$7f + (2f + f)$

10*f*

Solve:
$n + 3 = 8$
$n =$

5

Evaluate $4b + 2$ when

$b = 1$ **6**

$b = 3$ **14**

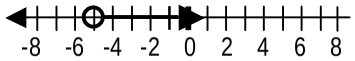
Write the expression for this phrase:
6 less than a number

***n* – 6**

Evaluate:
$(-2) \cdot (-4)$

8

Graph the expression $m > -5$



Write a word phrase for this expression:
$n + 9$

Nine more than a number

Evaluate:
$4 + (9 \div 3) - 2^2$

3

Evaluate:
$(-2)^3$

– 8

Write the expression for this phrase:
9 multiplied by a number

9*n*

Evaluate $2x + 4y$ when
$x = 2$ and $y = -3$

– 8

Write a word phrase for this expression:
$10b - 7$

Seven less than ten times a number

Evaluate $8g - 4$ when

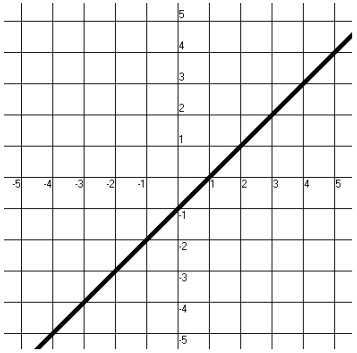
$g = 2$ **12**

$g = -2$ **– 20**

Simplify:
$6 - 2(b - 4)$

– 2*b* + 14

OSEP Award# H324C030060



What is the slope? **1**

What is the *y*-intercept? **– 1**

Fill in the empty box:

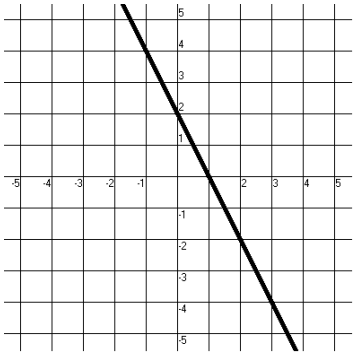
n	**$2n \div 3$**
6	4
9	6
12	8
15	10

Fill in the empty box:

t	$2t - 7$
-2	-11
2	-3
6	**5**
10	13

Fill in the empty box:

h	**$h + 7$**
-5	2
1	8
5	12
10	17



What is the slope? **– 2**

What is the *y*-intercept? **2**

Write a word phrase for this expression:
$x \div 4$

A number divided by four

Evaluate:
$(-12 \div 4) + 5$

2

Write the expression for this phrase:
8 more than twice a number

$2n + 8$

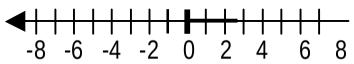
Solve:
$15 - 8 = x$
$x =$

7

Evaluate:
4^2

16

Graph the expression $p \leq 3$



Simplify:
$9x - 3 + 4(x + 9)$

$13x + 33$

Write the expression for this phrase:
10 divided by a number

$\frac{10}{n}$

If $2a + 4 < 20$, two possible values for a are _____ and _____

Any number less than 8

Solve:
$24 \div x = 6$
$x =$

4

Evaluate:
$10 - 3 + 8 \div 2$

11

Simplify:
$12n - 5 + 3 - 7n$

$5n - 2$

Write a word phrase for this expression:
$h \bullet 5$

A number multiplied by five

Evaluate:
$(-3)(9 - 7)$

– 6

Evaluate:
$\sqrt{81}$

9

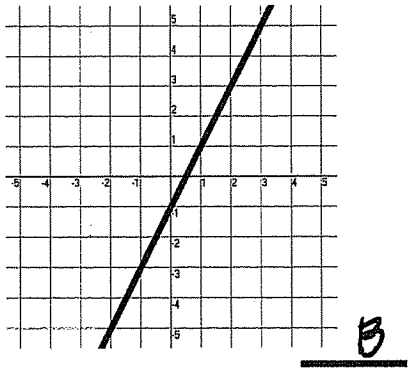
Solve:
$6t = 36$
$t =$

6

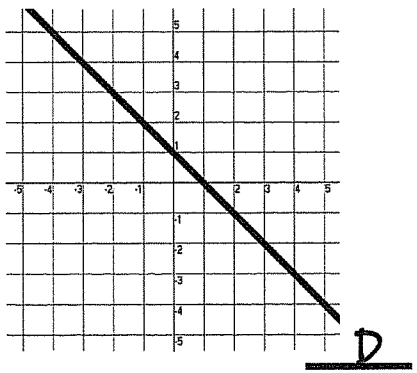
OSEP Award# H324C030060

Max

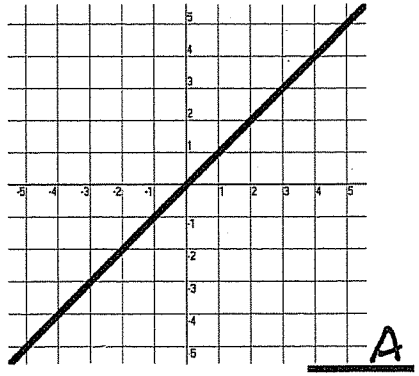
A	B	C	D
$y = x$	$y = 2x - 1$	$y = 1.5$	$y = -x + 1$



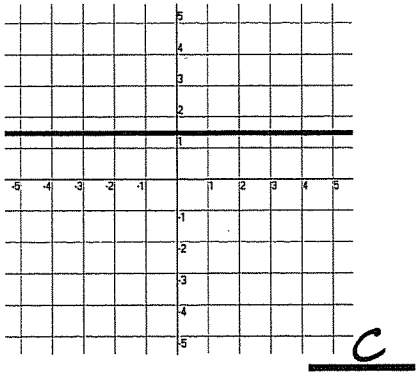
B



D



A



C

x	y
2	1.5
1	1.5
0	1.5
-1	1.5
-2	1.5

C

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

D

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

B

x	y
4	4
2	2
0	0
-2	-2
-4	-4

A

x	y
4	-3
2	-1
0	1
-2	3
-4	5

D

Mark needs to find half the width of pieces of pipe he is cutting to make a soccer goal. The width of the pipe is 3 inches. He wrote this equation to show the relationship between the length and the width of the pieces he will cut.	A
Every day that Cindy waters the garden, she earns a dollar. She wrote this equation to show the relationship between the number of days she waters the garden and the number of dollars she will earn.	B
Joe has one dollar in his wallet. He wrote this equation to show the relationship between the number of dollars he borrows from his friends for lunch and the total amount of money he has or owes.	C
The class earns $2 for each magazine subscription sold in the fund-raiser. A $1 fee per student is charged for a processing fee. Cindy wrote this equation to show the relationship between the number of magazines sold and the profit.	D
The flood waters are receding at a rate of 1 foot per day. The river is currently at 1 foot above flood stage. Tom wrote this equation to show the relationship between the number of days and the height of the river compared to flood stage.	A

OSEP Award# H324C030060

Max

A

x	y
4	16
2	4
0	0
-2	4
-4	16

B

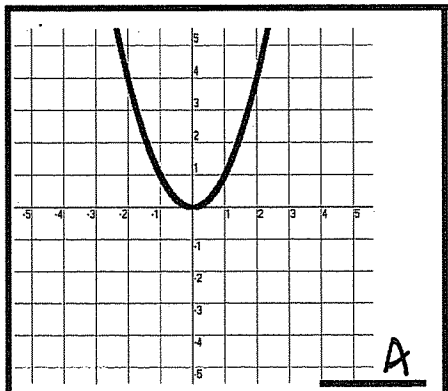
x	y
2	4
1	2
0	1
-1	$\frac{1}{2}$
-2	$\frac{1}{4}$

C

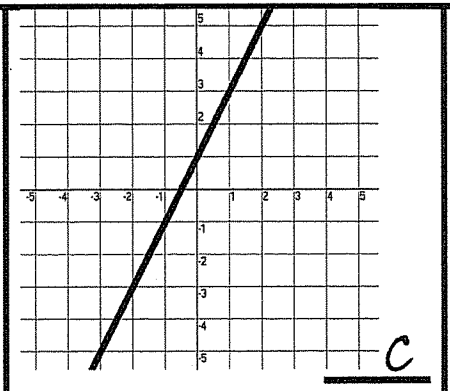
x	y
2	5
1	3
0	1
-1	-1
-2	-3

D

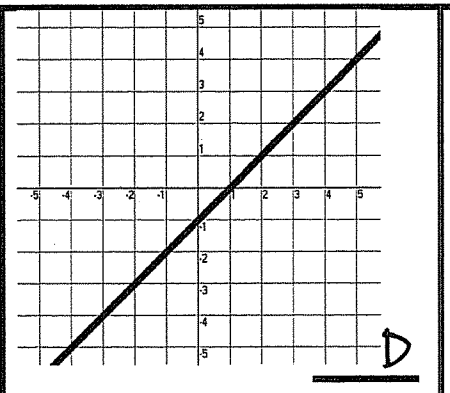
x	y
4	3
2	1
0	-1
-2	-3
-4	-5



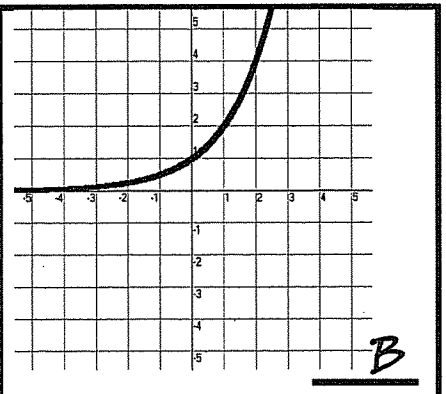
A



C



D



B

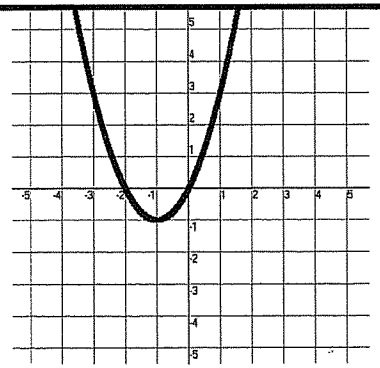
$y = 2x + 1$ C	$y = 2^x$	$y = x - 1$ D	$y = x^2$ A	$3y = 6x + 3$

Mr. Jones is going to give a true/false test. He made this data table to show the number of possible answer combinations his students can give on the test.	A
Sue made this data table to figure out how many inches of wire she needs for a bracelet. Each bracelet uses two strands and she needs to add an extra inch to make a hook to fasten the bracelet.	B
Sam's allowance changes every year. Each month his mom pays him a dollar for each year he has lived, multiplied by his age. Sam made this data table to figure out his allowance.	C
Every time Hans delivers newspapers, he keeps one for his family. Hans made this data table to show how many newspapers he delivers to families on his route.	D
Tim's washing machine 'eats' socks. The first time he lost one sock in the wash. Now, every time he washes a load of clothes, he loses two socks. Tim made this data table to figure out how many socks he has lost.	A

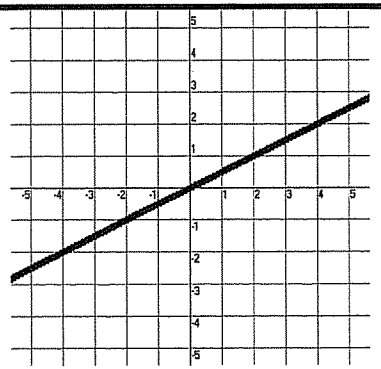
OSEP Award# H324C030060

Max

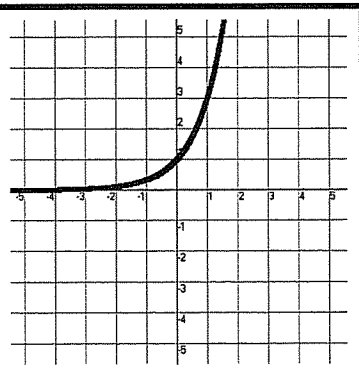
A



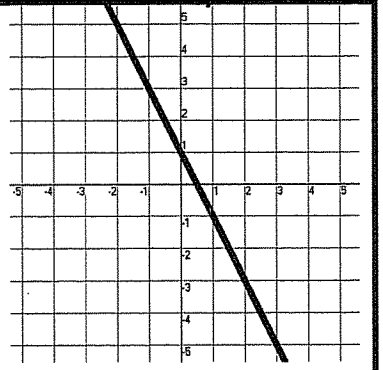
B



C



D



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

D

x	y
4	2
2	1
0	0
-2	-1
-4	-2

A

x	y
2	9
1	3
0	1
-1	$\frac{1}{3}$
-2	$\frac{1}{9}$

C

x	y
2	8
1	3
0	0
-1	-1
-2	0

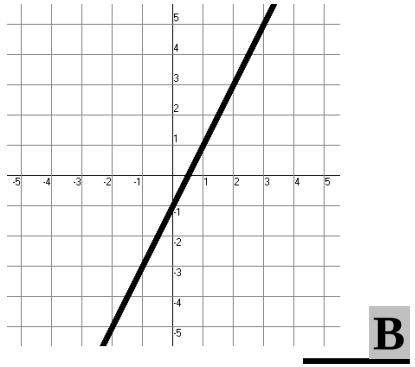
B

$y = -2x + 1$ ____	$y = x^2 + 2x$ ____	$y = 3^x$ ____	$y = x(x+2)$ ____	$y = \frac{1}{2}x$ B

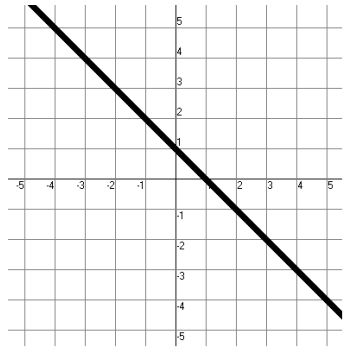
Matt built a maze for his gerbil. Each time the gerbil comes to an intersection, it can go three possible ways. Matt made this graph to show the total possible number of routes for the gerbil through the maze.	A
LaShaya's mom makes her save half of what she earns in the summer for college. She made this graph to show how much money she will earn for her college fund this summer.	B
A diving board is one foot above the surface of the pool. An average diver drops twice his height when he steps off the board. Marcus made this graph to show the diver's depth in the water.	C
Ming Hui has two cats, Oscar and Otis. She knows that Oscar eats twice as much as Otis. She made this graph to show how much Otis eats.	D
Tammy is making a backdrop for the school play. She needs to add on to a square piece of wood. The piece she will add is the same height as the square, but only 2 feet wide. Tammy made this graph to show the area of the backdrop.	A

OSEP Award# H324C030060

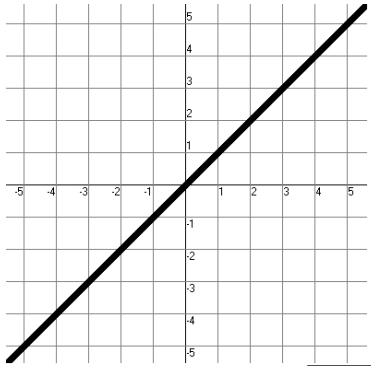
A	**B**	**C**	**D**
$y = x$	$y = 2x - 1$	$y = 1.5$	$y = -x + 1$



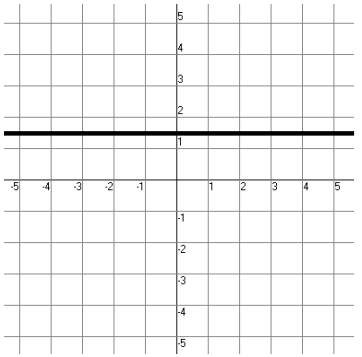
B



D



A



C

x	y	
2	1.5	
1	1.5	
0	1.5	**C**
-1	1.5	
-2	1.5	

x	y	
2	-1	
1	0	
0	1	**D**
-1	2	
-2	3	

x	y	
2	3	
1	1	
0	-1	**B**
-1	-3	
-2	-5	

x	y	
4	4	
2	2	
0	0	**A**
-2	-2	
-4	-4	

x	y	
4	-3	
2	-1	
0	1	**D**
-2	3	
-4	5	

Mark needs to find half the width of pieces of pipe he is cutting to make a soccer goal. The width of the pipe is 3 inches. He wrote this equation to show the relationship between the length and the width of the pieces he will cut.	**C**
Every day that Cindy waters the garden, she earns a dollar. She wrote this equation to show the relationship between the number of days she waters the garden and the number of dollars she will earn.	**A**
Joe has one dollar in his wallet. He wrote this equation to show the relationship between the number of dollars he borrows from his friends for lunch and the total amount of money he has or owes.	**D**
The class earns $2 for each magazine subscription sold in the fund-raiser. A $1 fee per student is charged for a processing fee. Cindy wrote this equation to show the relationship between the number of magazines sold and the profit.	**B**
The flood waters are receding at a rate of 1 foot per day. The river is currently at 1 foot above flood stage. Tom wrote this equation to show the relationship between the number of days and the height of the river compared to flood stage.	**D**

OSEP Award# H324C030060

A

x	y
4	16
2	4
0	0
-2	4
-4	16

B

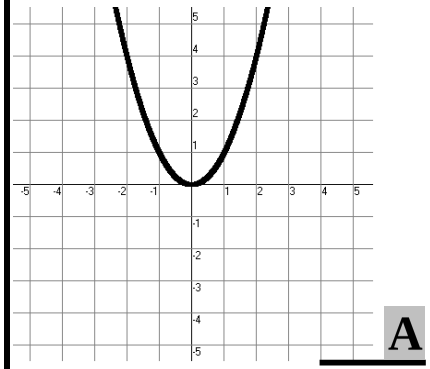
x	y
2	4
1	2
0	1
-1	$\frac{1}{2}$
-2	$\frac{1}{4}$

C

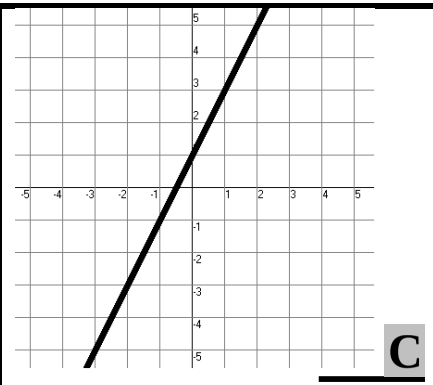
x	y
2	5
1	3
0	1
-1	-1
-2	-3

D

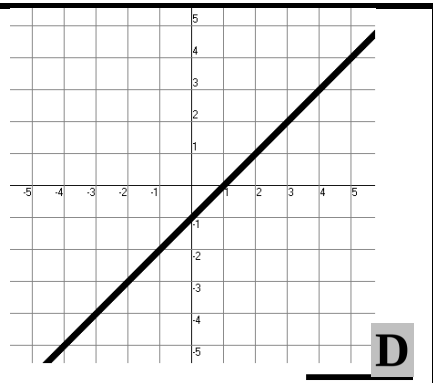
x	y
4	3
2	1
0	-1
-2	-3
-4	-5



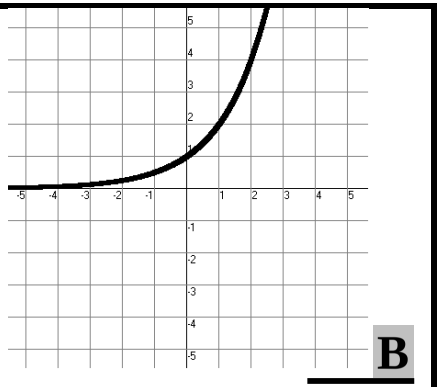
A



C



D



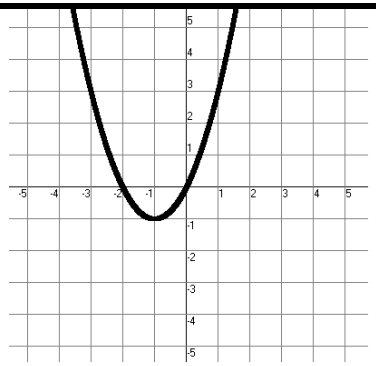
B

$y = 2x + 1$ **C**	$y = 2^x$ **B**	$y = x - 1$ **D**	$y = x^2$ **A**	$3y = 6x + 3$ **C**

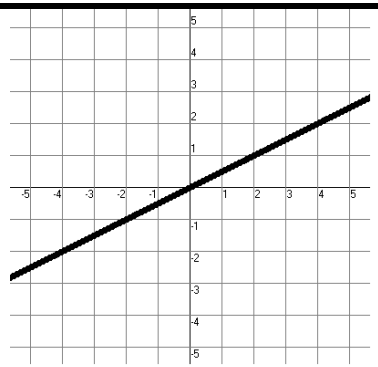
Mr. Jones is going to give a true/false test. He made this data table to show the number of possible answer combinations his students can give on the test.	**B**
Sue made this data table to figure out how many inches of wire she needs for a bracelet. Each bracelet uses two strands and she needs to add an extra inch to make a hook to fasten the bracelet.	**C**
Sam's allowance changes every year. Each month his mom pays him a dollar for each year he has lived, multiplied by his age. Sam made this data table to figure out his allowance.	**A**
Every time Hans delivers newspapers, he keeps one for his family. Hans made this data table to show how many newspapers he delivers to families on his route.	**D**
Tim's washing machine 'eats' socks. The first time he lost one sock in the wash. Now, every time he washes a load of clothes, he loses two socks. Tim made this data table to figure out how many socks he has lost.	**C**

OSEP Award# H324C030060

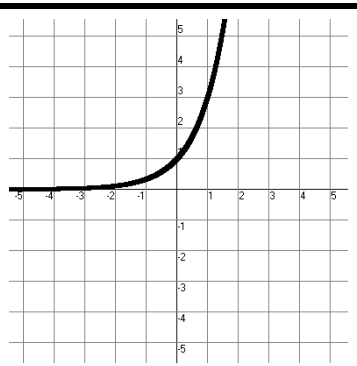
A



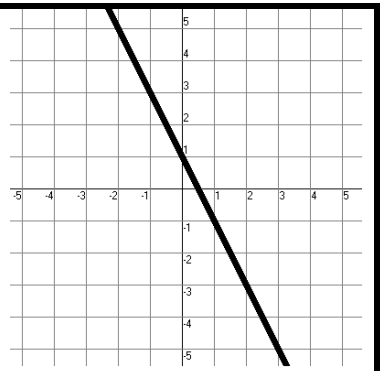
B



C



D



x	y	
2	-3	
1	-1	
0	1	**D**
-1	3	
-2	5	

x	y	
4	2	
2	1	
0	0	**B**
-2	-1	
-4	-2	

x	y	
2	9	
1	3	
0	1	**C**
-1	$\frac{1}{3}$	
-2	$\frac{1}{9}$	

x	y	
2	8	
1	3	
0	0	**A**
-1	-1	
-2	0	

$y = -2x + 1$ **D**	$y = x^2 + 2x$ **A**	$y = 3^x$ **C**	$y = x(x + 2)$ **A**	$y = \frac{1}{2}x$ **B**

Matt built a maze for his gerbil. Each time the gerbil comes to an intersection, it can go three possible ways. Matt made this graph to show the total possible number of routes for the gerbil through the maze.	**C**
LaShaya's mom makes her save half of what she earns in the summer for college. She made this graph to show how much money she will earn for her college fund this summer.	**B**
A diving board is one foot above the surface of the pool. An average diver drops twice his height when he steps off the board. Marcus made this graph to show the diver's depth in the water.	**D**
Ming Hui has two cats, Oscar and Otis. She knows that Oscar eats twice as much as Otis. She made this graph to show how much Otis eats.	**B**
Tammy is making a backdrop for the school play. She needs to add on to a square piece of wood. The piece she will add is the same height as the square, but only 2 feet wide. Tammy made this graph to show the area of the backdrop.	**A**

OSEP Award# H324C030060

Max

Solve:
$3x + 4 = 19$

$x =$ -4 -4

$\frac{3x}{3} = \frac{15}{3}$

$x = 4$

a) 8
b) 22
c) 15
d) 5

Evaluate $a^2 - b \div 2$ when $a = 4$ and $b = 6$

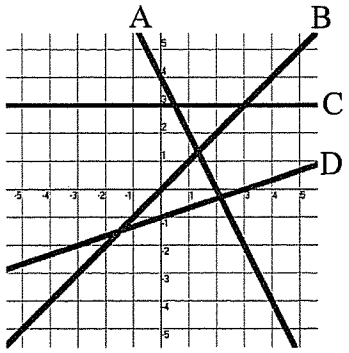
$4^2 - 6 \div 2$

$8 - 6 \div 2$

$2 \div 2$

a) 1
b) 5
c) 10
d) 13

Which line on the graph is $y + 2x = 4$?



a) Line A
b) Line B
c) Line C
d) Line D

Simplify:
$3(m + 2) + 2(m - 1)$

$3m + 2 + 2m - 1$

$5m + 1$

a) $5m + 4$
b) $5m + 1$
c) $6m + 8$
d) $6m - 8$

Evaluate the expression:

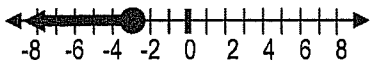
6^{-2}

a) -36
b) $\frac{1}{36}$
c) $\frac{1}{12}$
d) -12

Solve the linear system:
$x - y = 4$
$x + 2y = 19$

a) $(-1, -5)$
b) $(5, 8)$
c) $(-2, 19)$
d) $(9, 5)$

This graph shows the solution for which inequality?



$x < -3$

a) $x > -3$
b) $2x \leq -6$
c) $-3x > 9$
d) $3x \geq 9$

Write the equation in slope-intercept form if $m = \frac{1}{2}$ and $b = 3$

$y = \frac{1}{2}x + 3$

a) $y = 2x + 3$
b) $y = 3x + \frac{1}{2}$
c) $x = \frac{1}{2}y - 3$
d) $y = \frac{1}{2}x + 3$

Max

Evaluate $d + 3c^2$ when $d = 5$ and $c = 2$

$5 + 3 \cdot 2^2$

$5 + 12$

a) 11
b) 23
c) 17
d) 10

Solve:
$6c + 4 = -3c - 14$
$c =$

$+3 \quad +3$

$9c + 4 = -14$

$-4 \quad -4$

$\frac{9c}{9} = \frac{-18}{9}$

$c = -2$

a) $-\frac{10}{3}$
b) -2
c) 2
d) 6

Find the slope of a line through
$(1, -1)$ $(5, 2)$

$\frac{5-1}{2-1} = \frac{4}{3}$

a) $\frac{1}{5}$
b) $\frac{3}{4}$
c) -6
d) $-\frac{4}{3}$

Simplify:
$6(2b - 3) - 3(2 - b)$

$12b - 18 - 6 - 3b$

$9b - 24$

a) $15b - 24$
b) $9b - 9$
c) $9b + 12$
d) $15b + 12$

Simplify the expression:

$$\frac{a^2}{ab^3} \bullet \frac{b^4}{a^3}$$

a) $\frac{a^8}{a^3b^3}$
b) $\frac{ab^8}{a^4b^3}$
c) $\frac{b}{a^2}$
d) $\frac{b}{a}$

Solve the linear system:
$-6x + 3y = -6$
$2x + 6y = 30$

a) (6, 3)
b) (3, 4)
c) (2, 6)
d) (4, −3)

Simplify:
$b^2 - 4b + 2b^2 + 7 - 5$

a) $3b^2 - 4b + 2$
b) $2b + 2$
c) $-b^2 - 4b + 12$
d) $3b^2 - 4b + 12$

Write the equation of a line through (5, 3) (4, 9). Use point-slope form.

a) $y + 1 = 2(x - 4)$
b) $y + 4 = -6(x - 1)$
c) $y - 3 = -6(x - 5)$
d) $y = -6x + 30$

OSEP Award# H324C030060

Solve:
$3x + 4 = 19$
$x =$

Isolates variables by subtracting 4 from each side
$3x = 15$

Isolates variable and divides by 3 to solve for x

a) 8
b) 22
c) 15
d) 5

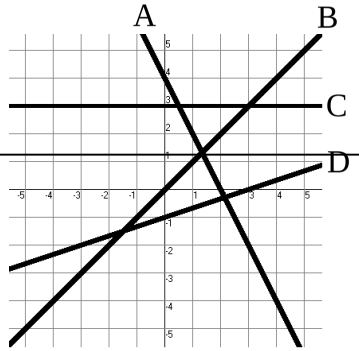
Evaluate $a^2 - b \div 2$ when
$a = 4$ and $b = 6$

Substitutes values for variables
$4^2 - 6 \div 2$
$16 - 6 \div 2$
$16 - 6 = 10$
$10 \div 2$

Further reduces elements in the expression
$16 - 3$

a) 1
b) 5
c) 10
d) 13

Which line on the graph is
$y + 2x = 4$?
$y = -2x + 4$



a) Line A
b) Line B
c) Line C
d) Line D

Simplify:
$3(m + 2) + 2(m - 1)$

Distributes either term so that response includes
$3m + 6$
<u>OR</u> $2m - 2$
<u>OR</u> $5m$

Distributes both terms correctly
$3m + 6 + 2m - 2$

<u>OR</u> Distributes either term correctly <u>and</u> includes 5m or + 4 in response

a) $5m + 4$
b) $5m + 1$
c) $6m + 8$
d) $6m - 8$

Evaluate the expression:

6^{-2}

Applies the negative exponent
$\frac{1}{6^2}$

a) – 36
b) $\frac{1}{36}$
c) $\frac{1}{12}$
d) – 12

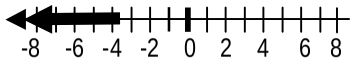
Solve the linear system:
$x - y = 4$
$x + 2y = 19$

Chooses a correct multiplier for combination (i.e.,multiply 1st equation by 2 or -1 or 2nd eq. by -1)
<u>OR</u> Isolates one variable (x = , y =) for substitution

Solves correctly for 1 variable using either method <u>OR</u> follows steps to solve, but makes computational errors <u>OR</u> plugs in solution for 1 variable if using substitution

a) (– 1, – 5)
b) (5, 8)
c) (– 2, 19)
d) (9, 5)

This graph shows the solution for which inequality?



$x \leq -3$

Shows evidence of understanding simplifying of inequalities by dividing answer options to isolate variables

a) $x > -3$
b) $2x \leq -6$
c) $-3x > 9$
d) $3x \geq 9$

Write the equation in slope-intercept form if $m = \frac{1}{2}$ and $b = 3$

$y = mx + b$
<u>OR</u> an expression that includes $\frac{1}{2}x$

$\frac{1}{2}x + 3$ (but no 'y = ')

a) $y = 2x + 3$
b) $y = 3x + \frac{1}{2}$
c) $x = \frac{1}{2}y - 3$
d) $y = \frac{1}{2}x + 3$

Evaluate $d + 3c^2$ when $d = 5$ and $c = 2$ *Substitutes values for variables* *$5 + 3 \cdot 2^2$* *Further reduces elements in the expression* *$5 + 3 \cdot 4$* *$5 + 12$* a) 11 b) 23 **c) 17** d) 10	Solve: $6c + 4 = -3c - 14$ $c =$ *Isolates variables on 1 side (+ 3c or – 6c to both sides)* *OR Isolates constants on 1 side (– 4 or + 14 to both sides)* *Isolates constants and variables* *OR Isolates variables or constants and divides to solve for c* a) $-\frac{10}{3}$ **b) – 2** c) 2 d) 6	Find the slope of a line through $(1, -1)$ $(5, 2)$ *Draws a graph to determine slope* *OR uses slope formula* $\frac{2-{}^{-}1}{5-1}$ *or* $\frac{{}^{-}1-2}{1-5}$ *Finds slope, but has negative values in numerator and denominator* $\frac{{}^{-}3}{{}^{-}4}$ a) $\frac{1}{5}$ **b) $\frac{3}{4}$** c) – 6 d) $-\frac{4}{3}$	[24] Simplify: $6(2b - 3) - 3(2 - b)$ *Distributes either term so that response includes* *$12b - 18$* *OR $- 6 + 3b$* *OR $15b$* *Distributes both terms correctly* *$12b - 18 - 6 + 3b$* *OR Distributes either term correctly and includes 15b or – 24 in response* **a) $15b - 24$** b) $9b - 9$ c) $9b + 12$ d) $15b + 12$
Simplify the expression: $\frac{a^2}{ab^3} \cdot \frac{b^4}{a^3}$ *Multiplies across to combine terms OR simplifies by reducing either the a or b terms* *EX:* $\frac{a^2b^4}{a^4b^3}$ *or* $\frac{a}{b^3} \cdot \frac{b^4}{a^3}$ *Simplifies both the a and b terms, but expression is not fully reduced* *EX:* $a \cdot \frac{b}{a^3}$ a) $\frac{a^8}{a^3b^3}$ b) $\frac{ab^8}{a^4b^3}$ **c) $\frac{b}{a^2}$** d) $\frac{b}{a}$	Solve the linear system: $-6x + 3y = -6$ $2x + 6y = 30$ *Chooses a correct multiplier for combination (i.e., multiplies1st equation by – 2 or 2nd eq. by 3)* *OR Isolates one variable (x = , y =) for substitution* *Solves correctly for 1 variable using either method OR follows steps to solve, but makes computational errors OR plugs in solution for 1 variable if using substitution* a) (6, 3) **b) (3, 4)** c) (2, 6) d) (4, -3)	Simplify $b^2 - 4b + 2b^2 + 7 - 5$ *Combines any 2 like terms (i.e., b^2, constants)* *$3b^2$ OR 2* *Combines both like terms, but makes an error in computation* *EX: $3b^2 - 4b + 12$* **a) $3b^2 - 4b + 2$** b) $2b + 2$ c) $-b^2 - 4b + 12$ d) $3b^2 - 4b + 12$	Write the equation of a line through $(5, 3)$ $(4, 9)$. Use point-slope form. *Determines correct slope* *OR applies slope formula* $\frac{9-3}{4-5}$ *or* $\frac{3-9}{5-4}$ *or m = - 6* *Uses correct slope and one other aspect of point-slope formula,* *EX: $y - 3 = -6(x - \square)$* *$y - 9 = -6(x - \square)$* *$y - \square = -6(x - 4)$* *$y - \square = -6(x - 5)$* a) $y + 1 = 2(x - 4)$ b) $y + 4 = -6(x - 1)$ **c) $y - 3 = -6(x - 5)$** d) $y = -6x + 30$

OSEP Award# H324C030060