

# SCRAPES, BUMPS, & BRUISES

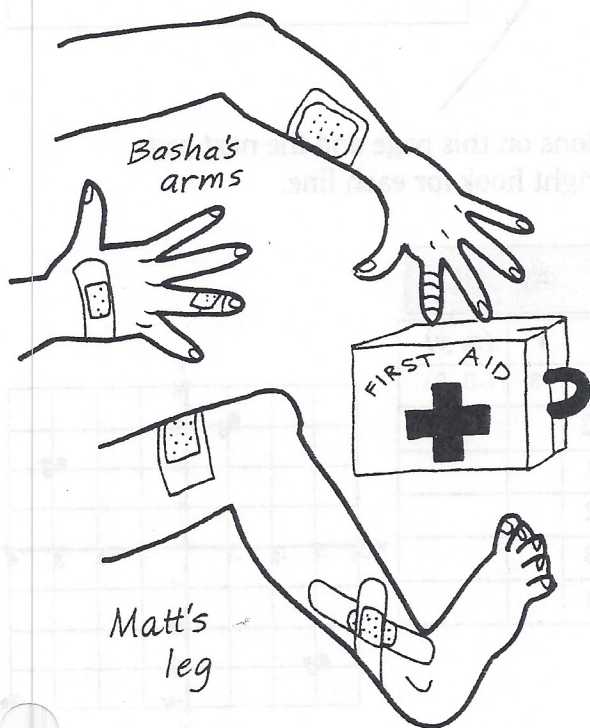
The numbers of cuts and scrapes, bruises and bumps, and blisters and bites are growing daily. Together, Basha and Matt have 14 bandaged cuts. How many does each of them have? You cannot find out unless you know the number for one of the campers.

This problem can be solved with an equation that has two variables.

The equation that represents this problem is  $x + y = 14$ .  
( $x$  for Basha;  $y$  for Matt)  
Complete the table to show some possible solutions.

- If Basha has 7, what number does Matt have? \_\_\_\_\_
- If Yolanda and Mike have 22 cuts between them, how many does Yolanda ( $y$ ) have if Mike ( $x$ ) has 7? \_\_\_\_\_

Complete Tables B-E to show possible solutions for the equations.



**A**

$x + y = 14$		
$x$	$y$	$(x, y)$
2	12	(2, 12)
4		
5		
8		
10		
12		

**B**

$x = y + 3$		
$x$	$y$	$(x, y)$
-5	-8	(-5, -8)
	0	
	-3	
-2		
5		
	-4	

**C**

$y = -4x$		
$x$	$y$	$(x, y)$
-3	12	(-3, 12)
	-8	
-1		
4		
	20	
7		

**D**

$2x + y = 3$		
$x$	$y$	$(x, y)$
-5	13	(-5, 13)
-3		
-1		
0		
3		
6		

**E**

$x - 2y = 6$		
$x$	$y$	$(x, y)$
0	-3	(0, -3)
	-1	
	0	
	2	
	4	
	5	

Name \_\_\_\_\_

# LINEAR CONTEMPLATIONS

$$y = x + 2$$

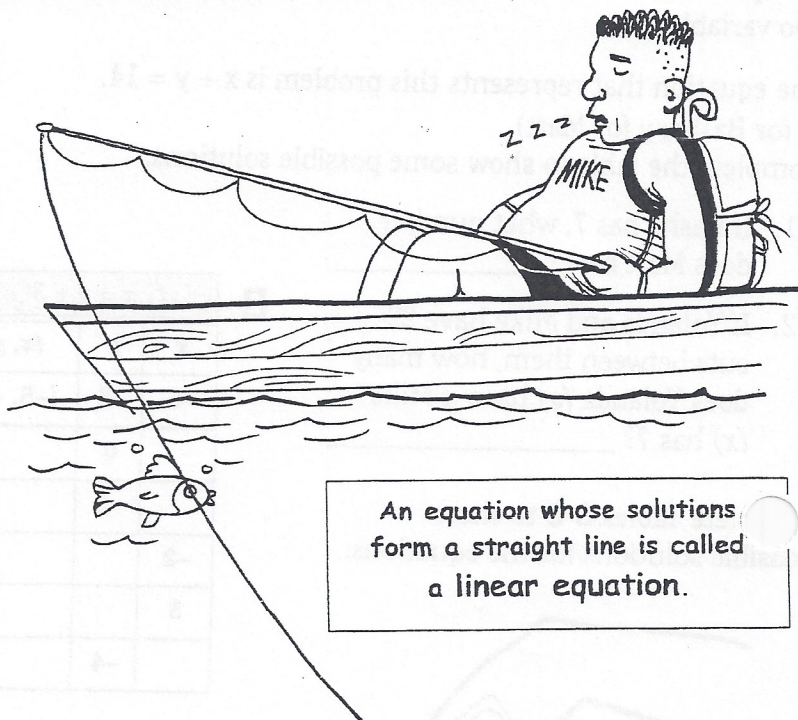
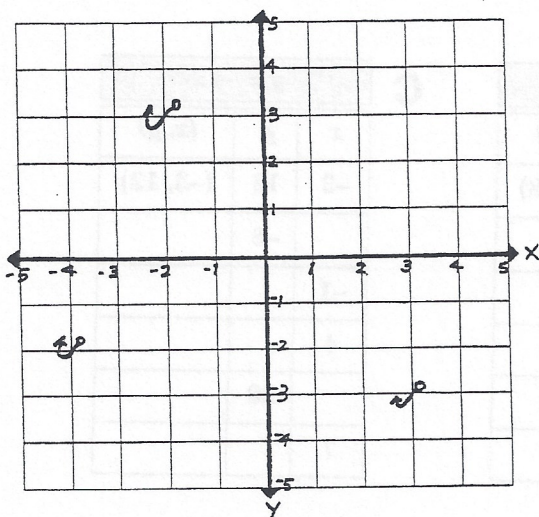
x	y	(x, y)
-4	-2	(-4, -2)
-3	-1	(-3, -1)
-2	0	(-2, 0)
-1	1	(-1, 1)
0	2	(0, 2)
1	3	(1, 3)
2	4	(2, 4)

Mike has had no bites for hours, so he's fallen asleep contemplating the possibilities for his fishing line. Which hook in the graph is attached to Mike's line? You can find out by graphing the linear equation.

Graph the solutions shown on the table.

Connect the solutions with a line.

This will show which hook is attached to Mike's fishing line.

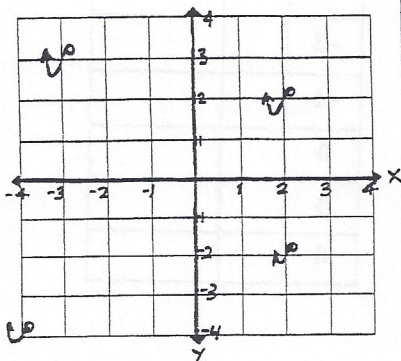


Complete the tables to find solutions for the linear equations on this page and the next page (pages 44 and 45). Then graph each equation to find the right hook for each line.

A.

$$y = 2x + 4$$

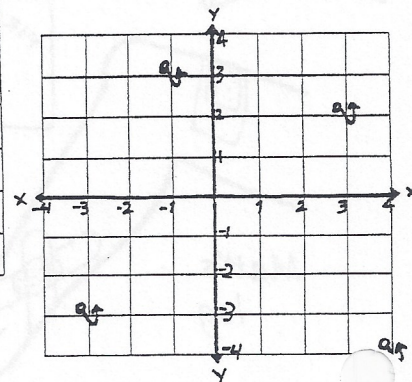
x	y	(x, y)
-4	-4	(-4, -4)
-3		
-2		
-1		
0		



B.

$$x = -y$$

x	y	(x, y)
-3	3	(-3, 3)
-2		
1		
2		
3		
4		



Name \_\_\_\_\_

# POISON IVY PROBLEMS

Chad and Zoey are covered with poison ivy. They're trying to cover all the spots on their bodies with soothing aloe lotion. Chad has 5 times as many spots as Zoey.

How many does Chad have? You can't figure that out until you know the number of spots on Zoey.

The equation that represents this problem is  $x = 5y$ .

( $x$  for Chad;  $y$  for Zoey)

This problem has two variables.

The second one depends on the first.

Complete the table to show some possible solutions.

Complete Tables B-E to show possible solutions for the equations.



**A**

$x = 5y$		
$x$	$y$	$(x, y)$
40	8	(40, 8)
10		
5		
0		
-30		
-35		

**B**

$x + 5 = y$		
$x$	$y$	$(x, y)$
-3	2	(-3, 2)
-1		
0		
1		
2		
3		



**C**

$x = 2y$		
$x$	$y$	$(x, y)$
4	2	(4, 2)
-2		
0		
2		
4		
6		

**D**

$x = 3y - 2$		
$x$	$y$	$(x, y)$
-8	-2	(-8, -2)
	-1	
	0	
	1	
	2	
	3	

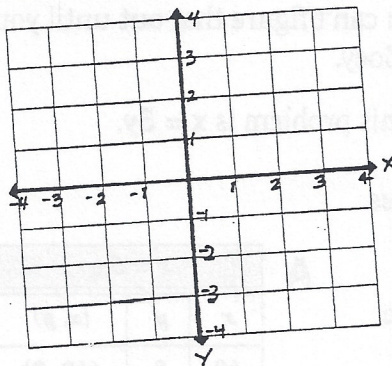
**E**

$3x = y$		
$x$	$y$	$(x, y)$
-5	-15	(-5, -15)
-3		
-1		
0		
2		
5		

Name \_\_\_\_\_

# LINEAR CONTEMPLATIONS, CONT.

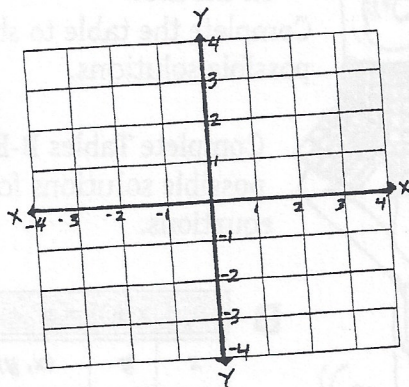
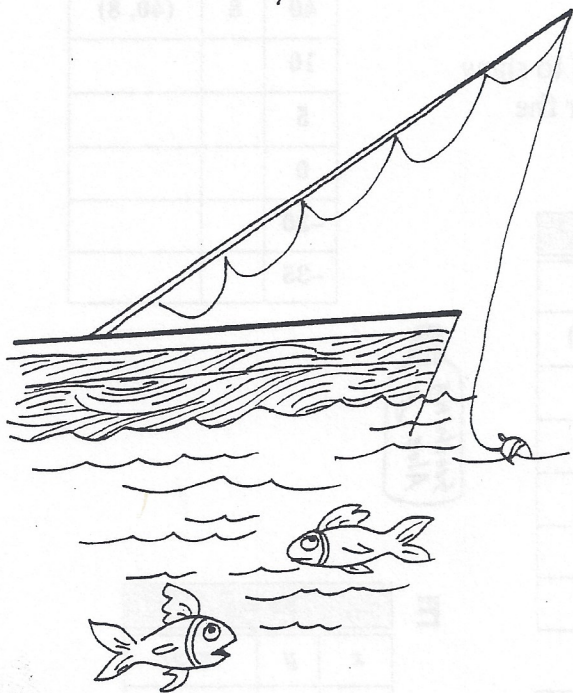
Graph each "fishing line" equation. Draw a hook at the lower end.



**C.  $y = 2x$**

Finish these ordered pairs, then graph the solution.

$(-2, -4)$ ;  $(-1, \underline{\quad})$ ;  $(0, \underline{\quad})$ ;  $(1, \underline{\quad})$ ;  $(2, \underline{\quad})$



**D.  $y = -2x + 1$**

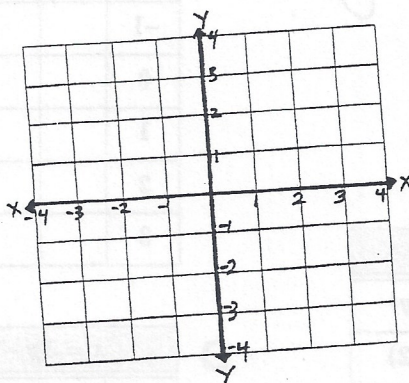
Finish these ordered pairs, then graph the solution.

$(-1, 3)$

$(0, \underline{\quad})$

$(1, \underline{\quad})$

$(2, \underline{\quad})$



**E.  $y = x + 5$**

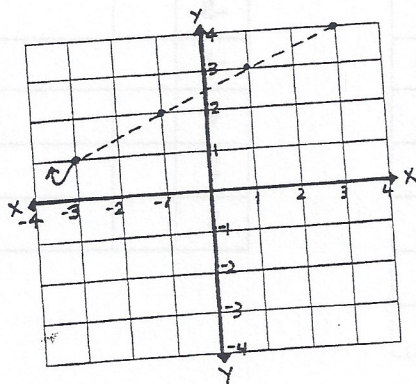
Finish these ordered pairs, then graph the solution.

$(-4, 1)$

$(-3, \underline{\quad})$

$(-2, \underline{\quad})$

$(-1, \underline{\quad})$



**F. Which equation matches this graph?**  
Circle the correct equation.

a.  $y = x - 1$

b.  $y = 2x$

c.  $2y = x + 5$

d.  $y = x + 1$

e.  $y = 2x + 2$

f.  $y = 3x$