GRADE 11 ESSENTIAL
UNIT F – RELATIONS AND PATTERNS
GRAPHING LINES

Name:_____
Date: _____

What Helps Chicks Get Out of Their Shells?

Complete the table of solutions for each equation. Then graph the solutions and draw a line through them. The line, if extended, will cross a letter outside the grid. Write this letter in each box containing the exercise number.
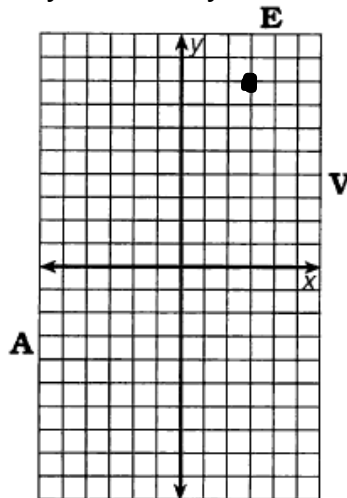
4	3	1	1	6	6	5	2	4

Do these accurately manually, check with a graphing tool

1

$y = 3x - 1$

x	y
3	8
2	
-2	
0	

2

$y = -2x + 3$

x	y
5	
-3	
2	
0	
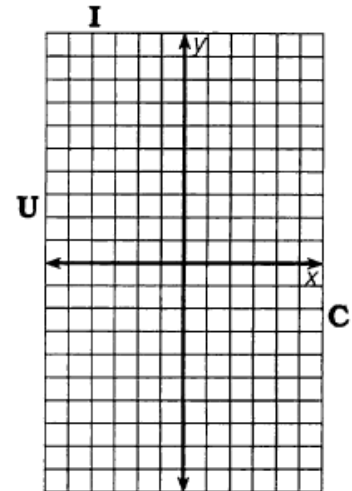
3

$y = -x - 2$

x	y
6	
-5	
-2	
0	

4

$y = \frac{1}{2}x + 4$

x	y
4	
6	
-2	
0	

F

5

$y = 7 - 2x$	
x	y
2	
−1	
5	
0	

B

S

6

$y = -\frac{2}{3}x + 1$	
x	y
6	
−6	
3	
0	

G

N

L
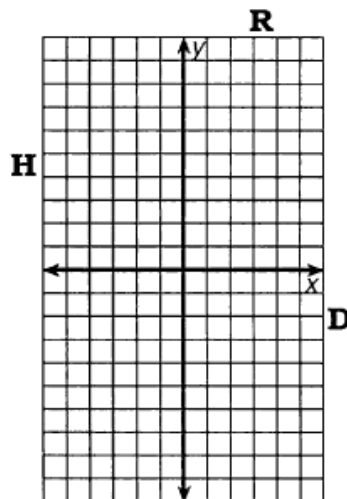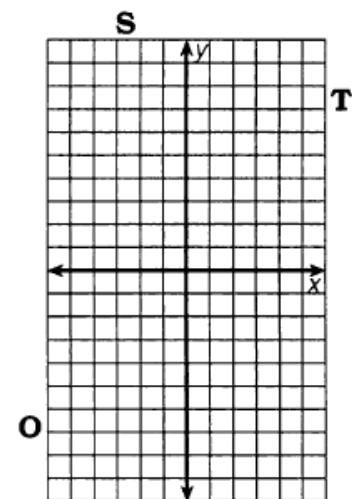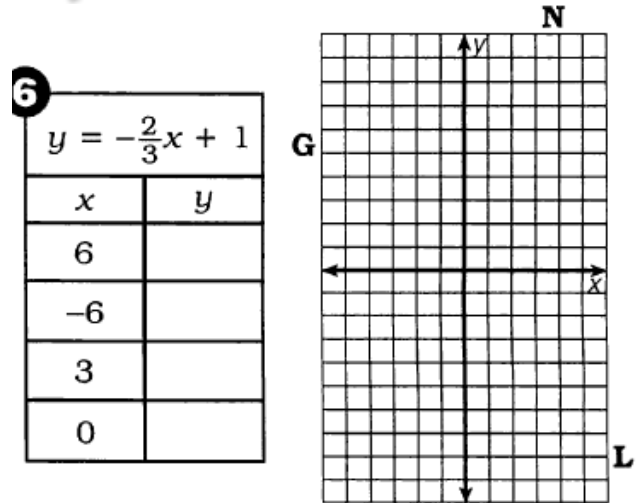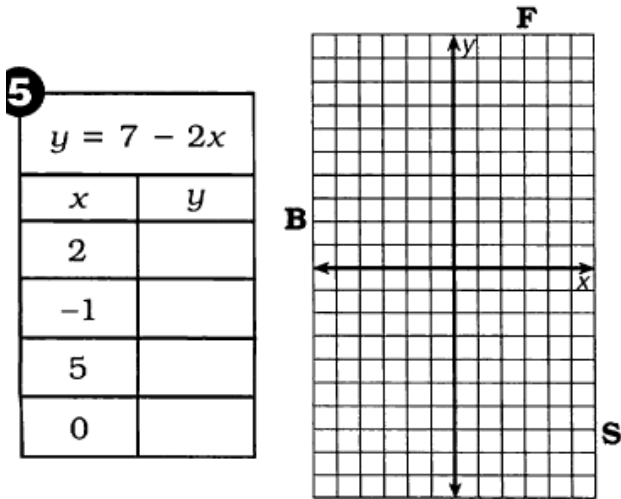
Did you know that graphing is a great way to do problems like:

If three pizzas plus a $3.69 bottle of Coke costs $38.22; how much does one pizza cost?

Type in an expression:
$$y = 3x + 3.69$$

[so '**y**' is the possible cost of 3 pizzas and the coke if **x** is *some variable* value for the price of one pizza]

A table will calculate lots of possibilities.→

So look in a table and see when the total is $38.22!

X	Y$_1$
7	24.69
8	27.69
9	30.69
10	33.69
11	36.69
12	39.69

2nd GRAPH
button

So **x** is somewhere between 11 and 12.

So graph it!
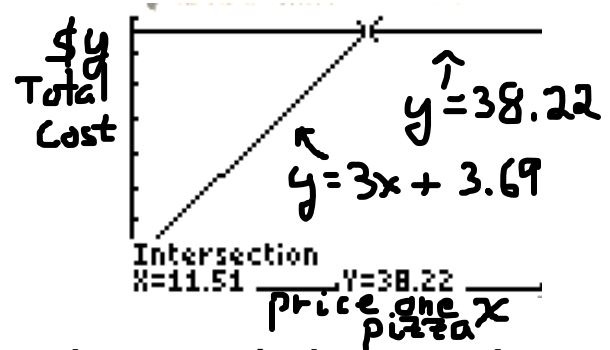Make sure the **window** you display goes from 0 to 20 for the **x** and 0 to 40 for the **y**

WINDOW
Xmin=0
Xmax=20
Xscl=5
Ymin=0
Ymax=40
Yscl=5
Xres=■

tick·mark every 5 →

And graph a horizontal line at y = 38.22
(so a second line)

$y

Total Cost

$y = 38.22$
$y = 3x + 3.69$

Intersection
X=11.51 Y=38.22

price one pizza X

Where they cross is the answer!
An x of 11.51 gives a total **y** of 38.22
See if you can figure out I found where the two lines intersect!