GRADE 11 APPLIED
UNIT A – QUADRATICS
ASSIGNMENT – GRAPH QUADRATIC
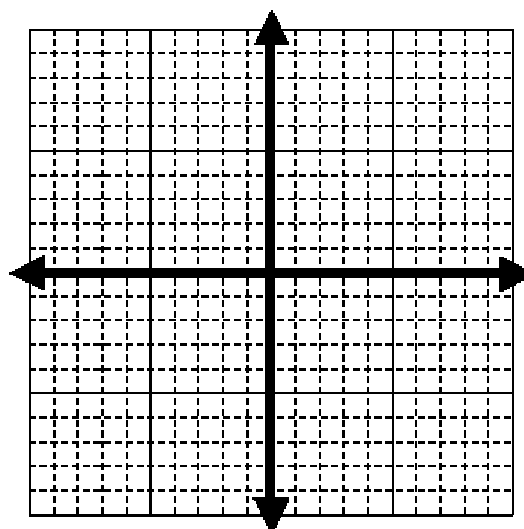
Name: _____
Date: _____

1.   Graph the given quadratic functions manually. Scale the y-axis where appropriate to fit any given domain of **x** values. You know the quadratic functions should have a single 'hump' and be symmetrical across a vertical line through the vertex (hump).
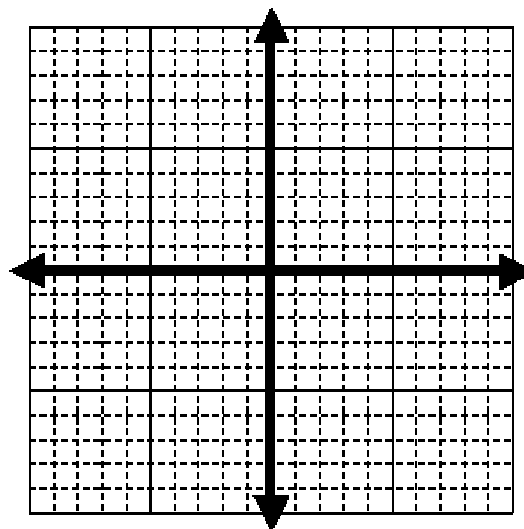
a. $y = x^2 - 4$

x	$x^2 - 4$	y
3	$(3)^2 - 4$	5
2	$(2)^2 - 4$	0
1		
0		
-1		
-2		
-3		

b. $y = 2x + 6$

x	$2x + 6$	y
2		
1		
0		
-3		

Pick your favourite '**x**' for the last one.
Btw; this one is just a simple line!

c. $y = x^2 - 6x$

x	$x^2 - 6x$	y
-1	$(-1)^2 - 6(-1)$	7
0	$(0)^2 - 6(0)$	0
1		
2		
3		
4		
5		
6		
7		
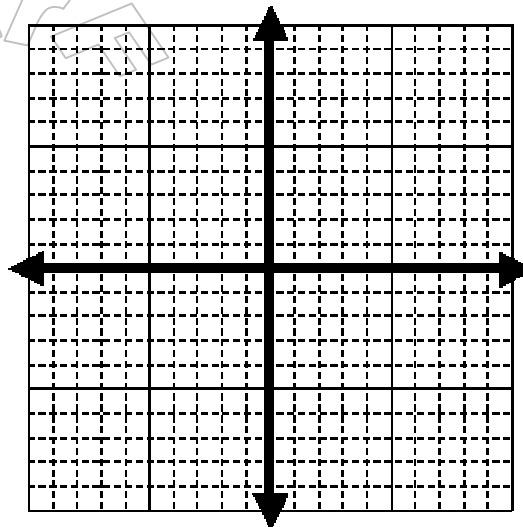
d. $y = x^2 + 2x - 3$

x	$x^2 + 2x - 3$	y
-2		
-1		
0		
1		
2		
3	$(3)^2 + 2(3) - 3$	12
4		

3
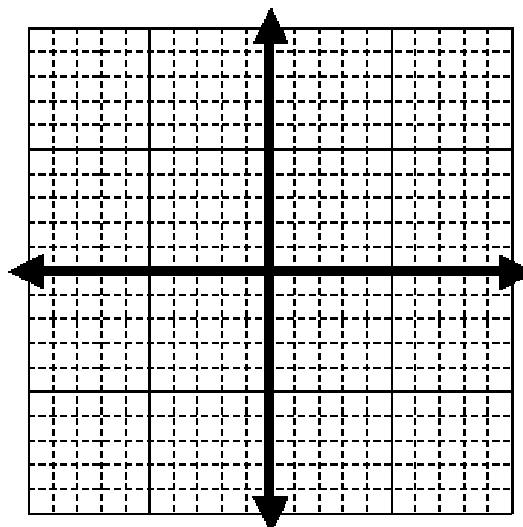
e. **y = (x – 1) (x + 3)**

BEDMAS: Do brackets first!

x	(x – 1)*(x + 3)	y
-2		
-1		
0		
1		
2		
3	((3) – 1)*((3) + 3)	12
4		
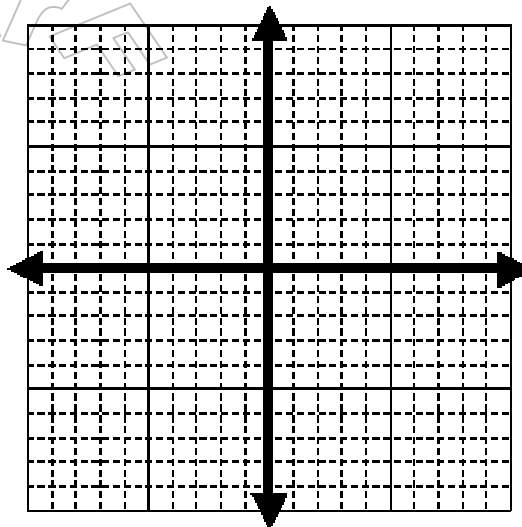
f. **y = –2x² – 8x – 4**

x	–2x² – 8x – 4	y
-4		
-3		
-2	–2(–2)² – 8(–2) – 4	4
-1		
0		
1		
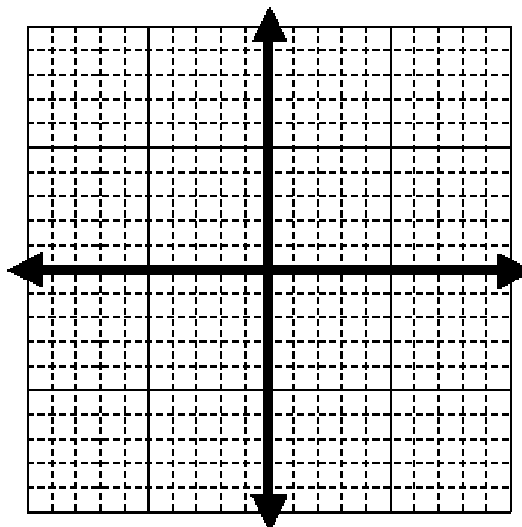
g. **y = –2(x + 2)² + 4**

x	–2(x + 2)² + 4	y
-4		
-3		
-2	–2((–2) + 2)² + 4	4
-1		
0		
1		
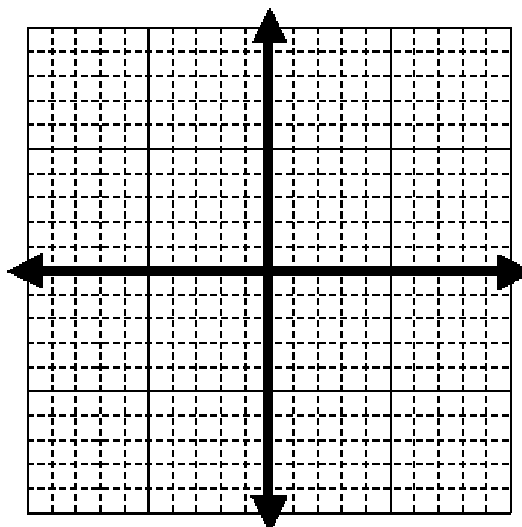
g. $y = -x^2 - 4$

Pick your own x's makes it tougher
(*don't forget to do exponents first*!)

x	y
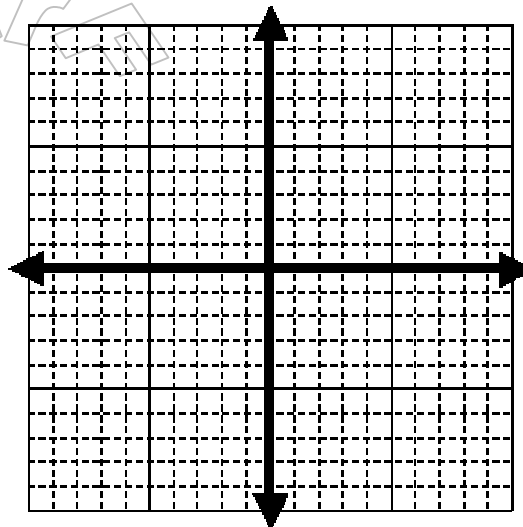
h. $y = -2x^2 + 6x - 7$

Pick your own x's
(don't forget to do exponent first!)

x	y
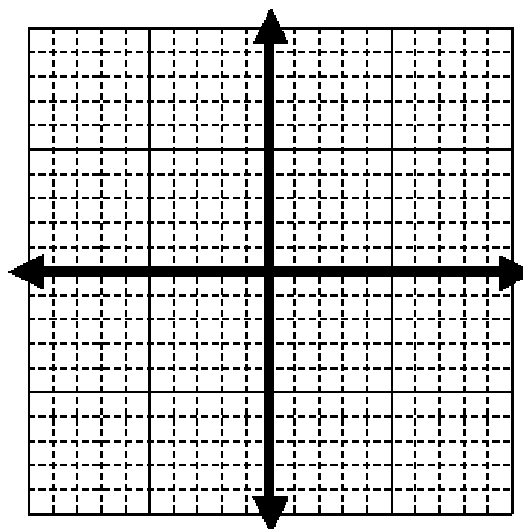
2.   Now; technically in Applied Math you are allowed to do all of these with a graphing tool! So check them all with a graphing tool using the same window scale as you used when you manually graphed. Check them out using an on-line web graphing tool too if you can.

3.   Did all of your manual graphs check out with the graphing tool? _____.

4.   In Pre-Calculus Mathematics courses you are not allowed to use the graphing calculator for these quadratic graphs! You would learn other tools instead.