Write the equation of a quadratic that meets the following condition:

LOS is to the left of the y-axis

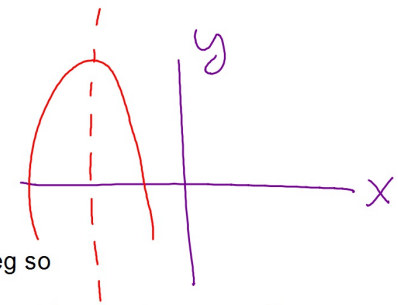
ex. response:

$y = -2x^2 - 12x$

or

$y = 2x^2 + 12x$

$-b/2a \rightarrow$ neg



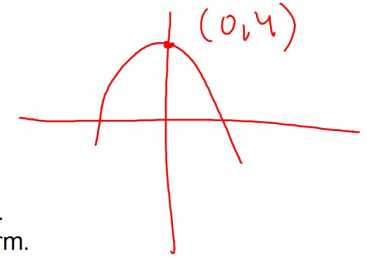
LOS must be neg so a and b must be the same sign. The constant, c, could be anything because this would only affect if the graph shifted up or down which doesn't change where the LOS is.

Write the equation of a quadratic that meets the following condition:

The graph opens downward and the vertex is at (0,4)

ex. response:

$y = -5x^2 + 4$



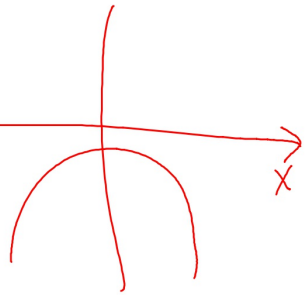
opens down and shifted up for units without moving left or right. This means there must be no bx term.

Write the equation of a quadratic that meets the following condition:

The graph lies entirely below the x-axis

ex. response:

$y = -7x^2 - 5$



opens down and shifted down

The linear term (bx) could be anything because this answer doesn't depend on whether it moved left or right.

You can now finish Hwk #22

Use the sheet I've printed for you.

Due Thursday.

What is a perfect square?

A number whose square root is a whole number.

The first nine perfect squares that we will be using a lot are:

4	9	16
25	36	49
64	81	100

Find the two factors of each number such that one of the factors is the biggest perfect square possible.

1. 75
   25 & 3
2. 63
   9 & 7
3. 32
   16 and 2
4. 98
   49 & 2
5. 108
   36 & 3
6. 243
   81 & 3

Which of the below can you find the square root without rounding the answer?

1. $\sqrt{121}$ = 11 ✓
2. $\sqrt{144}$ = 12 ✓
3. $\sqrt{48}$ between 6 & 7