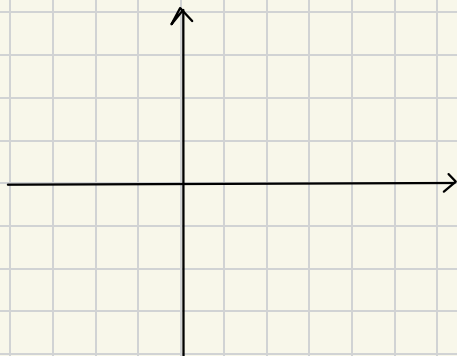


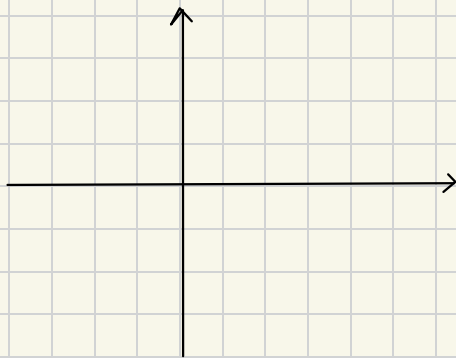
## Ch.2 BOARD PROBLEMS

① GRAPH  $y = \sqrt{x-3} + 1$



② GRAPH.

$$y = \begin{cases} x^2 + 1 & \text{for } x < -1 \\ x - 3 & \text{for } x > -1 \end{cases}$$



WHAT POINT(S) WOULD YOU ADD TO REMOVE THE DISCONTINUITIES?

③ write in standard form.

$$y = -\frac{1}{2}(x+3)^2 - 5$$

## Ch. 2 - Lines, Parabolas, Circles, Ellipses

### LINES

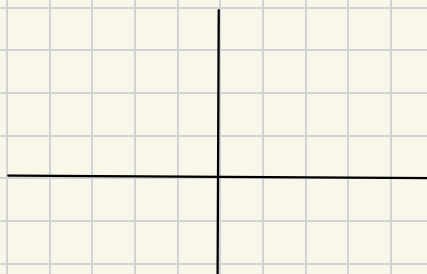
SLOPE-INTERCEPT FORM: \_\_\_\_\_

STANDARD FORM: \_\_\_\_\_

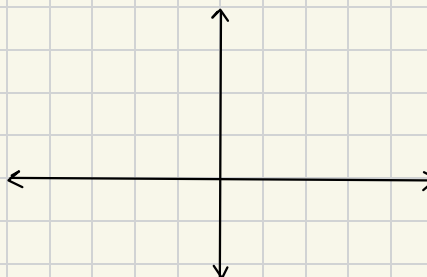
POINT-SLOPE FORM: \_\_\_\_\_

X AND Y INTERCEPT FORM: \_\_\_\_\_

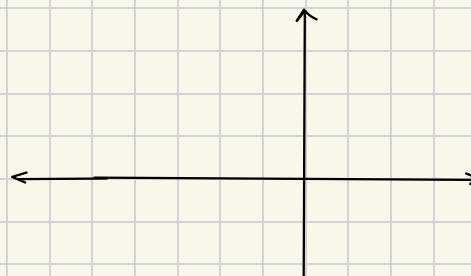
**EX. 1**  $x + y = 3$



**EX. 2**  $2x + 3y = 6$



**EX. 3**  $-2x + 3y = 12$



# PARABOLAS

## PARENT FUNCTION

HOW TO IDENTIFY PARABOLIC EQUATIONS?

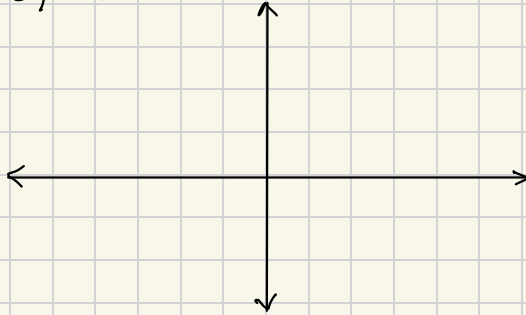
STANDARD FORM: \_\_\_\_\_

VERTEX FORM: \_\_\_\_\_

$$y = x^2$$

EX. 4

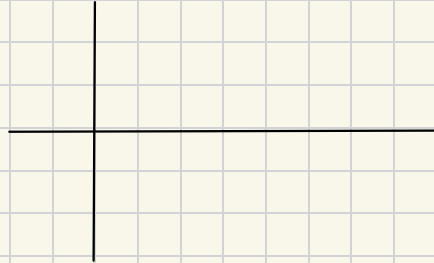
GRAPH  $x^2 - 4x - 8y - 20 = 0$



EX. 5

EXAMPLE OF RIGHT/LEFT PARABOLA

$$x = 3y^2 - 6y + 7 \rightarrow \text{CHANGE TO VERTEX FORM.}$$



WHAT WOULD CHANGE IN THIS EQUATION TO MAKE THE PARABOLA OPEN LEFT? \_\_\_\_\_

## CIRCLES

WHAT IS THE GRAPHING FORM OF A CIRCLE?

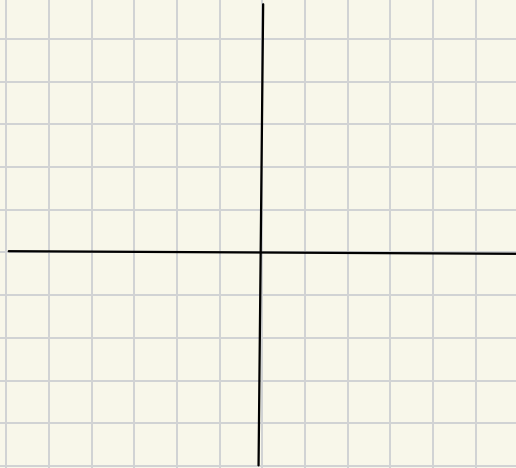
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WHERE THE CENTER IS: \_\_\_\_\_

AND THE RADIUS IS: \_\_\_\_\_

FIND THE CENTER AND RADIUS AND DRAW  
A GRAPH.

$$x^2 + y^2 - 8y + 4x - 5 = 0$$

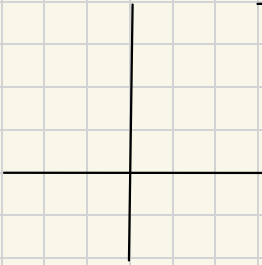


EX. 7

SEMI - CIRCLES

$$y = \sqrt{4 - x^2}$$

FIRST WRITE EXCLUSIONS FOR X.



ELLIPSES

$$\frac{(x-h)^2}{a^2} + \frac{(y-k)^2}{b^2} = 1$$

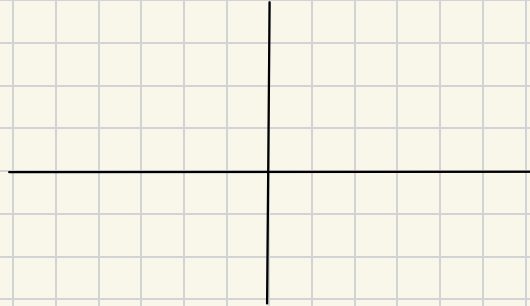
WITH CENTER: (      )

WITH EXTREMITIES:

(      ) (      )

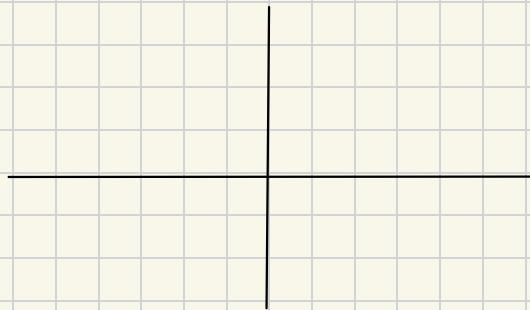
EX. 8

$$9x^2 + 16y^2 = 144$$



EX. 9

$$4x^2 + 25y^2 = 100$$



Ex. 10

$$x^2 + 9y^2 - 4x + 18y + 4 = 0$$

