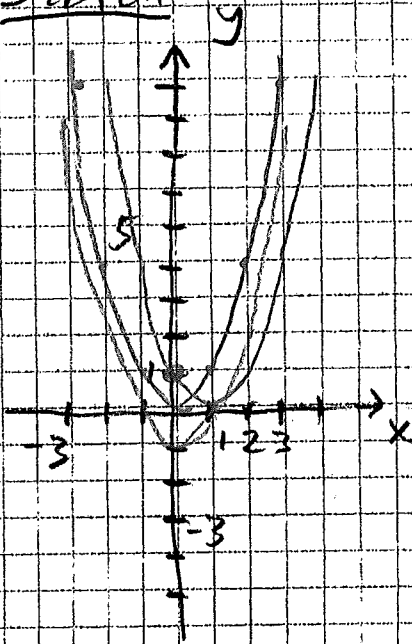


GRAPHING PARABOLS

c, SKETCH



FIRST FIND INTERCEPTS

1.  $y = x^2$

a, X-intercept = zero:  $x = 0$

b, y-intercept:  $y = 0$

c, vertex:  $(0, 0)$

2.  $y = x^2 - 1$

a, X-int. = zeros:  $x = \pm 1$

b, y-int:  $y = -1$

c, vertex:  $(0, -1)$

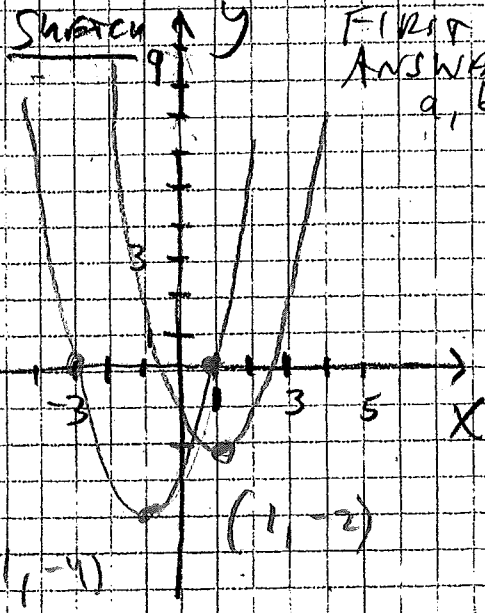
3.  $y = (x - 1)^2$

a, X-intercept = zero:  $x = 1$

b, y-int:  $y = 0$

c, vertex:  $(1, 0)$

d, SKETCH



FIRST ANSWER a, b

4.  $y = (x - 1)^2 - 2$

a, y-intercept:  $y = -2$

b, vertex:  $(1, -2)$

c, ESTIMATE ZEROS,  $x = -0.4, 2.4$

5.  $y = (x - 1)(x + 3)$

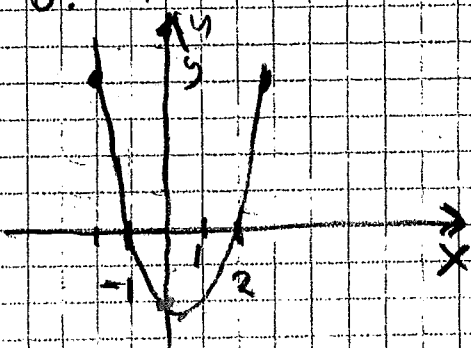
a, X-intercept = zeros:  $x = 1, x = -3$

b, y-int:  $-3$

c, vertex:  $(-1, -4)$

$(-2)(2) = -4$

6. FIND A POSSIBLE FORMULA



$y = a(x - 2)(x + 1)$   $\begin{cases} x = 0 \\ y = -2 \end{cases}$

$-2 = a(-2)(1)$

$a = 1$

$y = (x - 2)(x + 1)$