What's my function?

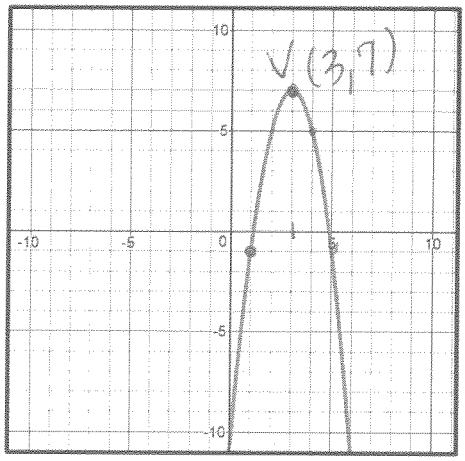
Name Master E

Use all of the clues given to write each quadratic function. Date _____ Block _____

1. I have a maximum of (-1, 4), and a vertical stretch of 2. What's my function?

$f(x) = -2(x+1)^2 + 4$

2. My graph is below. What's my function?



$a = -2$

$f(x) = -2(x-3)^2 + 7$

3. One of my zeros is 3, I have a line of symmetry at x = 1, and my range is $(-\infty, 8]$. What's my function?

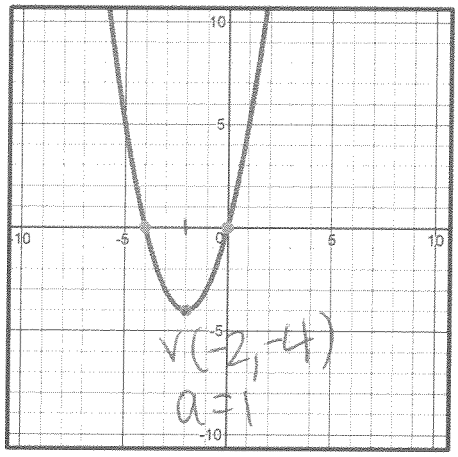
All graph paper

$f(x) = -2(x-1)^2 + 8$ or $f(x) = -2(x+1)(x-3)$

4. I have only one zero at 2, and a y-intercept at (0, 8). What's my function?

$f(x) = 2(x-2)^2$

5. My graph is below. What's my function?



$a = 1$

$f(x) = (x+2)^2 - 4$

6. I have a minimum of (-1, 5) and a vertical compression of $\frac{1}{3}$. What's my function?

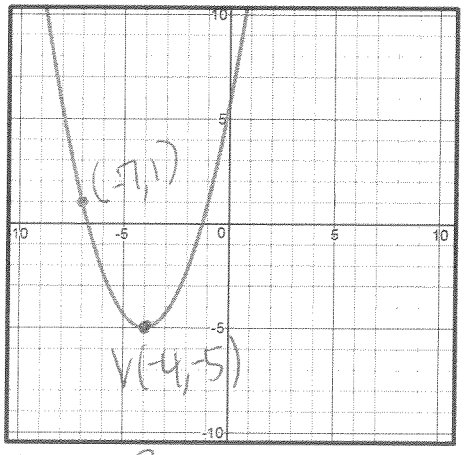
$+a$

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

7. One of my zeros is at 1, I have a maximum output value of 4, and my line of symmetry is x = 3. What's my function?

$f(x) = -(x-3)^2 + 4$

8. My graph is below. What's my function?



$y = a(x+4)^2 - 5$

$1 = a(-3)^2 - 5$

$1 = 9a - 5$

$6 = 9a$

$\frac{6}{9} = a$

$\frac{2}{3} = a$

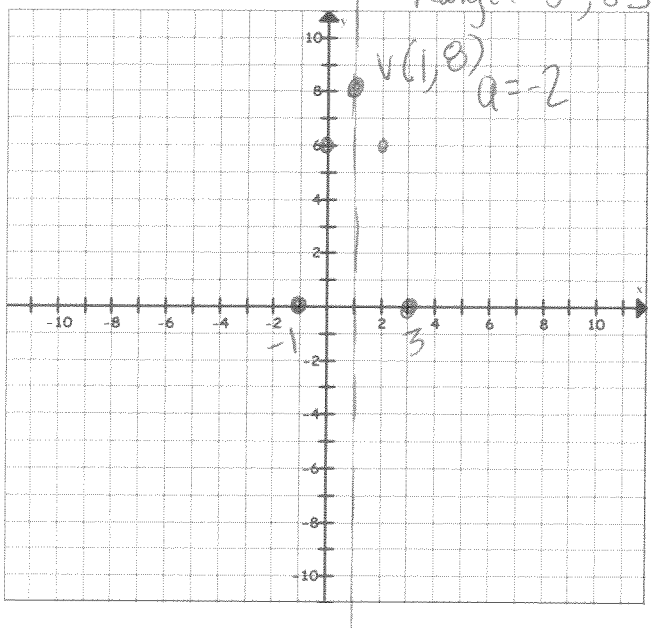
$f(x) = \frac{2}{3}(x+4)^2 - 5$

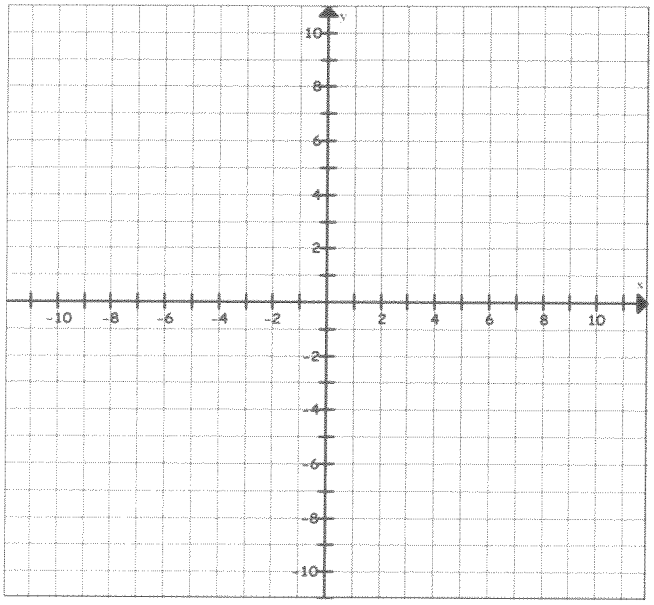
9. I have a vertical stretch of 3, and zeros at $-\frac{2}{3}$ and 6. What's my function?

$f(x) = 3(x+\frac{2}{3})(x-6)$

$f(x) = 3(3x+2)(x-6)$

3.





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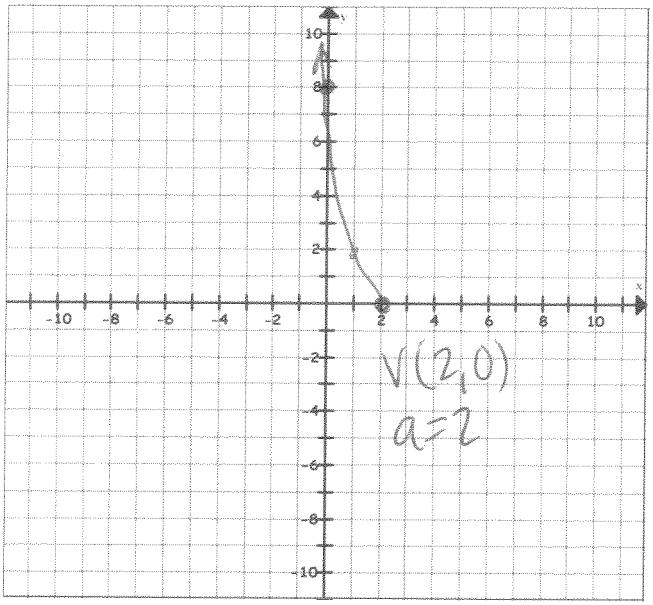

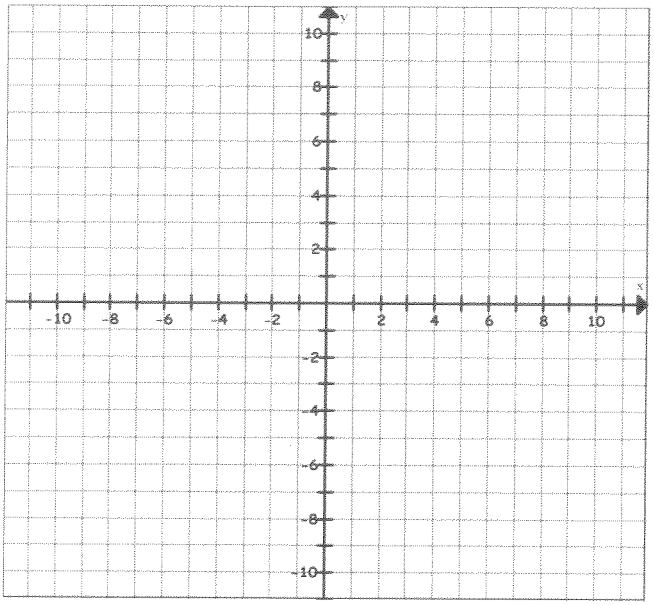

7.