

Mathematics 11UC

1.6b - Transformations

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$$f(x) = 3(x-4)^2 - 6$$

V. Stretch of 3 / H. Shift of +4 / V. shift of -6

y-axis

$$y = x^2$$

X	Y
-2	4
-1	1
0	0
1	1
2	4

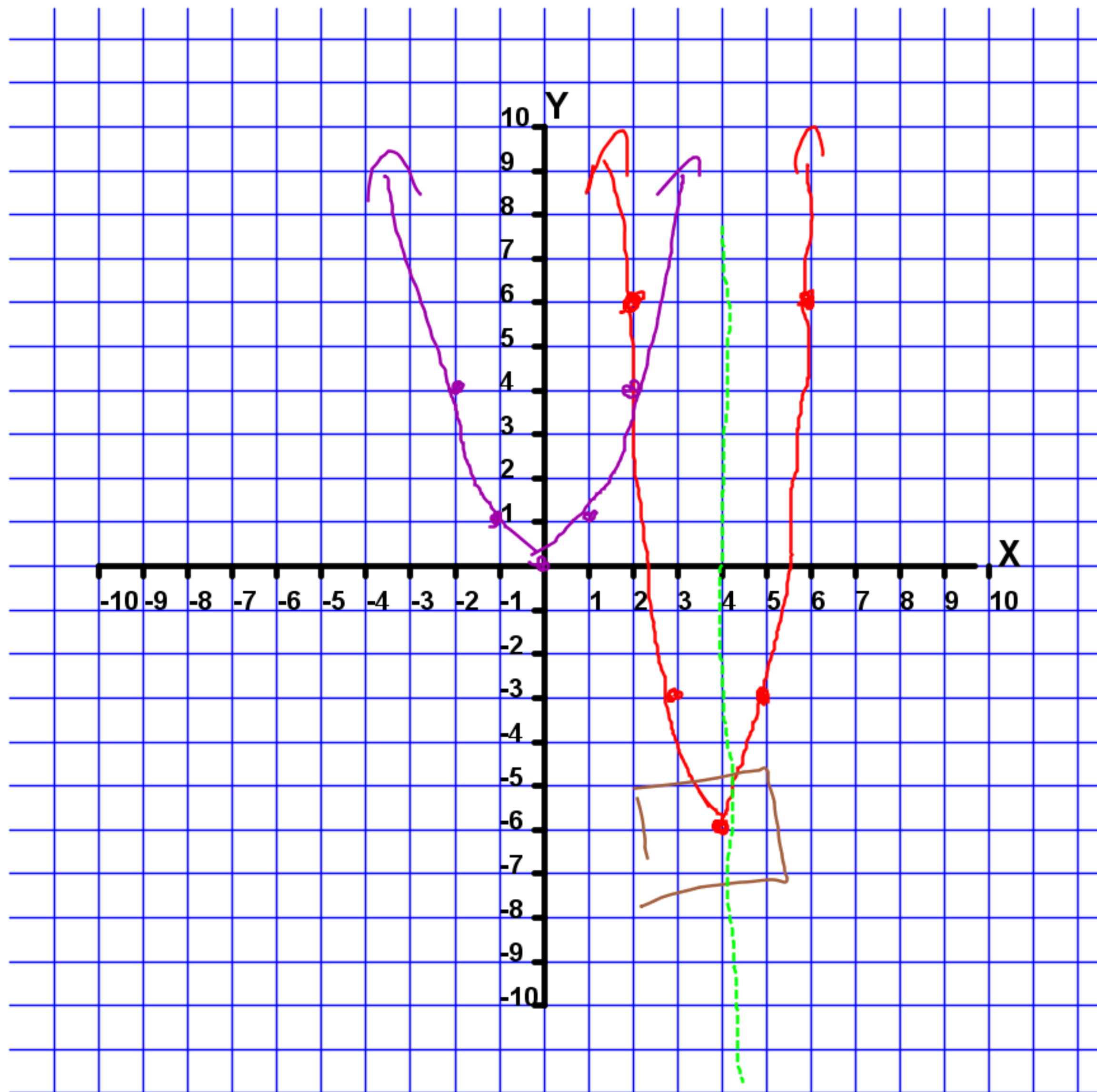
x-axis



$X+4$	$3Y-6$
2	6
3	-3
4	-6
5	-3
6	6

y-axis

New graph,



ax^3 of
5y symmetry
 $x = 4$

vertex
 $(4, -6)$

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

V. Str of $-\frac{1}{2}$ | H. Sh of -3 | V. Sh of $+5$

X	Y
2	4
1	1
0	0
-1	4

$X-3$	$-\frac{1}{2}Y+5$
-5	3
-4	4.5
-3	5
-2	4.5
-1	3

Vertex
 $(-3, 5)$

