

Review last day

We saw general forms of a linear function

$$f(x) = a(x - h) + k = \\ = ax + b$$

Fri 16 Nov 2018

General form of a QUADRATIC func

$$f(x) = a(x - h)^2 + k$$

EXAMPLES

- $f(x) = x^2$: $a=1, h=0, k=0$
- $g(x) = x^2 + 2$: $a=1, h=0, k=2$
- $h(x) = (x-4)^2 - 3$: $a=1, h=4, k=-3$
- $v(x) = (x+7)^2 - 2$: $a=1, h=-7, k=-2$

$$a \left((x-h)^2 \right) + k$$

Remember:

a is multiplying what's
in the red square

that is,
including the square

EXAMPLES (cont.)

$$f(x) = 2x^2 \quad a=2, h=0, k=0$$

$$f(x) = 0.5x^2 \quad a=0.5, h=0, k=0$$

$$f(x) = -2x^2 \quad a=-2, h=0, k=0$$

$$f(x) = -0.5x^2 \quad a=-0.5, h=0, k=0$$

ASSIGNMENT

DUE DATE: FRI 23 Nov '18

① Use Geogebra
to plot the last
4 examples

② 2nd Part

Do following exercises from book:

Page	Exercise #
24	1, 2, 3, 4
25	6, 7
37	4, 5, 6, 7
47	1*, 2*

Representing new functions

Ex: $g(x) = 2x^2 - 3x + 5$

a) Write the expression for $g(m)$

Ans: $g(m) = 2m^2 - 3m + 5$

b) Idem for $g(3m)$

Ans: $g(3m) = 2(3m)^2 - 3(3m) + 5 =$
 $= 18m^2 - 9m + 5$

let's simplify