NO QUIZ TODAY!

I will check your 1.2 Homework as soon as I get attendance taken.

Get out your books and begin lesson 1.3 on page 13.

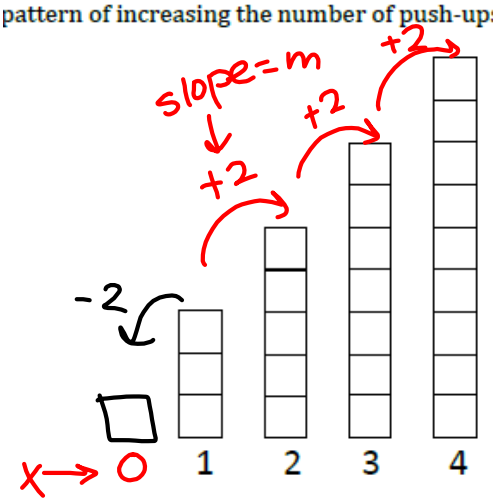
1.3 Scott's Macho March

A Solidify Understanding Task

After looking in the mirror and feeling flabby, Scott decided that he really needs to get in shape. He joined a gym and added push-ups to his daily exercise routine. He started keeping track of the number of push-ups he completed each day in the bar graph below, with day one showing he completed three push-ups. After four days, Scott was certain he can continue this pattern of increasing the number of push-ups for at least a few months.

linear

$y = mx + b$



$m = 2$ & $b = 1$

$f(x) = y$

Function $f(x)$	ordered pair
$f(0) = 2 \cdot 0 + 1 = 1$	$(0, 1)$
$f(1) = 2 \cdot 1 + 1 = 3$	$(1, 3)$
$f(2) = 2 \cdot 2 + 1 = 5$	$(2, 5)$
$f(3) = 2 \cdot 3 + 1 = 7$	$(3, 7)$
$f(4) = 2 \cdot 4 + 1 = 9$	$(4, 9)$

1. Model the number of push-ups Scott will complete on any given day. Include both explicit and recursive equations.

d=days
P=#of push-ups

Explicit: $y = 2x + 1$ or $f(x) = 2x + 1$

$P = 2d + 1 \longrightarrow p(d) = 2d + 1$

Recursive: previous +2

$f(x) = f(x-1) + 2$ or $f(n+1) = f(n) + 2$

Scott's gym is sponsoring a "Macho March" promotion. The goal of "Macho March" is to raise money for charity by doing push-ups. Scott has decided to participate and has sponsors that will donate money to the charity if he can do a total of at least 500 push-ups, and they will donate an additional $10 for every 100 push-ups he can do beyond that.

2. Estimate the total number of push-ups that Scott will do in a month if he continues to increase the number of push-ups he does each day in the pattern shown above.

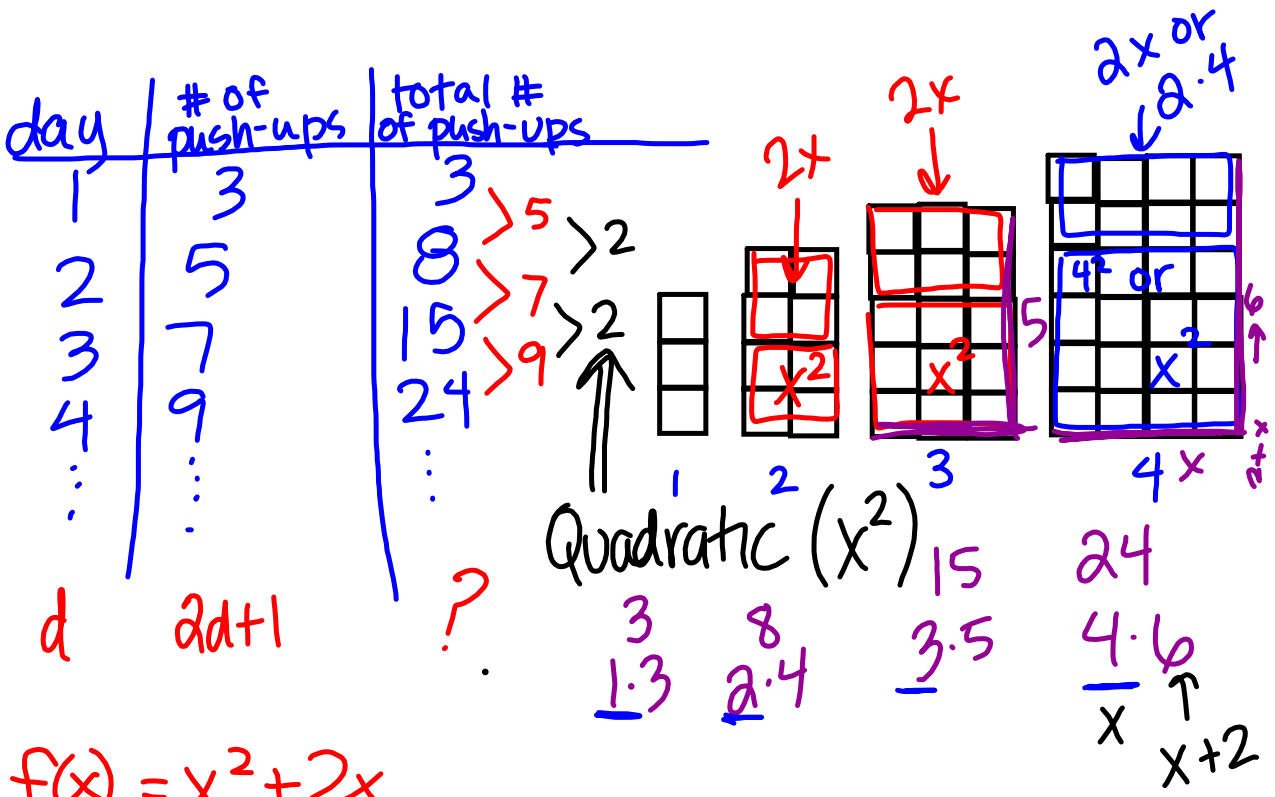
however many push-ups I think he will do in the 31 days of March.

Aug 19-12:03 PM

3. How many push-ups will Scott have done after a week?

Model the total number of push-ups that Scott has completed on any given day during "Macho March". Include both recursive and explicit equations.

day	# of push-ups	total # of push-ups
1	3	3
2	5	8
3	7	15
4	9	24
⋮	⋮	⋮
d	2d+1	?



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

$f(x) = x(x+2)$

5. Will Scott meet his goal and earn the donation for the charity? Will he get a bonus? If so, how much? Explain.

$f(31) = 31(33) = 1023$ push-ups

Homework/Classwork

Finish 1.3

Oct 21-8:47 AM