HW Hotline →

Pick Up the Warm Up

front side only for now.

If absent Friday be sure to pick up the half-sheet from me now!!

1.

(14, 10) and (-7, 1)

slope

$$m = \frac{10 - 1}{14 - -7}$$

14+7

$$m = \frac{10 - 1}{14 - -7}$$

14+7

$$m = \frac{9}{21} = \frac{3}{7}$$

② $y = mx + b$ (14, 10) and (-7, 1)

$y = \frac{3}{7}x + b$

$10 = \frac{3}{7}(14) + b$

$10 = 3/7(14) + b$

$10 = 6 + b$

$-6 \quad -6$

$5 = 4$

$y = \frac{3}{7}x + 4$

③ (8, -1) and (2, 7)

$m = \frac{-1 - 7}{8 - 2}$

$m = \frac{-8}{6}$

$m = -\frac{4}{3}$

$y = mx + b$

$7 = -\frac{4}{3}(2) + b$

$7 = -\frac{8}{3} + b$

$21 = -8 + 3b$

$29 = 3b$

$b = \frac{29}{3}$

$y = -\frac{4}{3}x + \frac{29}{3}$

3 **(8, -1) and (2, 7)**

$m = \frac{-1 - 7}{8 - 2}$

$m = \frac{-8}{6}$

$m = \left(-\frac{4}{3}\right)$

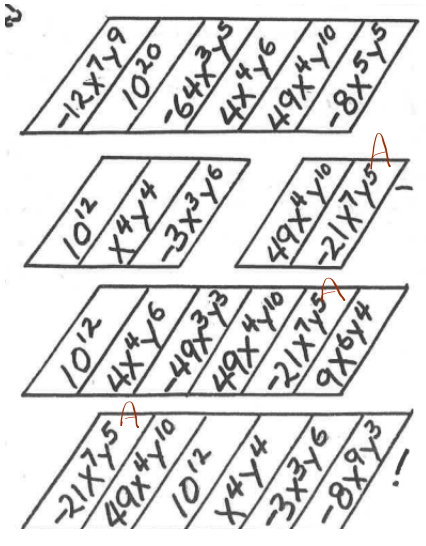
$y = mx + b$

$7 = -\frac{4}{3}(2) + b$

A	$(-3x^5y^4)(7x^2y)$
D	$(4x^6y^5)(-3xy)$
E	$(3xy^5)(-x^2y)$
G	$(8xy^2)(-x^4y^3)$
H	$(xy)(x^2y^2)(xy)$
R	$(8xy^2)(-xy)$

$-21x^7y^5$

$= -8x^5y^5$



I $(-2x^2y^3)^2$	L $(-3x^3y^2)^2$
M $(-2x^3y)^3$	N $(7x^2y^5)^2$
T $(10^4)^3$	U $(10^5)^4$
O $(7xy)^2(-xy) =$	

$(-2)^3 \quad (x^3)^3 \quad y^3$

$-8x^7y^3$

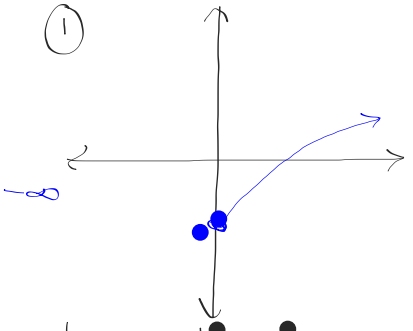
HW Questions ?

let's go over #86

86 $f(x) = \sqrt{x} - 2$

(2) Special point: endpoint $(0, -2)$

(1)



description:
Curved function with an endpoint

(3) Domain

(4) range

(5) end behavior
(R) As $x \to +\infty, +\infty$

(6)

(6) y-int $(0, \quad)$

$y = \sqrt{x} - 2$

x-int
$(\quad, 0)$

(7) Asympt NONE

(8) Symmetry
NONE

84 find intersection between

$f(x) = 2x^2 - 3x + 4$ and $g(x) = x^2 + 5x - 3$

$2x^2 - 3x + 4 = x^2 + 5x - 3$

$-x^2$

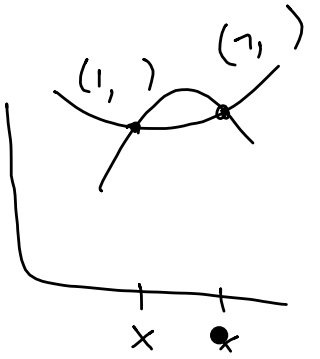
$x^2 - 8x + 7 = 0$

$(x-7)(x-1) = 0$

$a \cdot b = 0$

$x - 7 = 0$ $\quad x - 1 = 0$

$x = 7$ $\quad x = 1$



	x	-1
x	x^2	$-x$
-7	$-7x$	7

$7x^2$ $\quad -7x - x$

$-8x$

89

X - intercept

a $y = 3x - 6$

b $y = 2x^2 + 4$

89e

(5, 0) ← answer

91

A) $y = mx + b$

$-b \quad -b$

$y - b = mx$

$x = \frac{y-b}{m}$

OR

$x = \frac{y}{m} - \frac{b}{m}$

B) $A = \pi r^2$

$r^2 = \frac{A}{\pi}$

$r = \pm\sqrt{\frac{A}{\pi}}$

C) $V = LWH$

$W = \frac{V}{LH}$

d) $2x + \frac{1}{y} = 3$ ✔

93 $y = 3x + 15$ $y = 3 - 3x$

c) **Write an equation that does not contain y and solve it for x.**

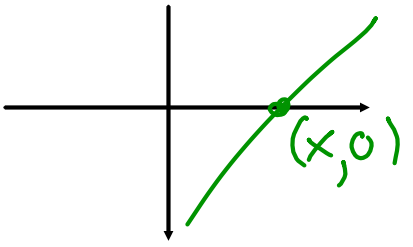
$3x + 15 = 3 - 3x$

$(-2, \quad)$

d) Use the x-value you found to find the corresponding y- value

95 $h(x) = x^2 - 5$

find x-intercepts



97 MATCHING

a. $x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$

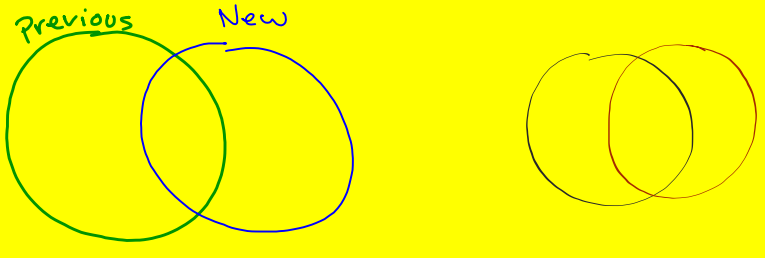
b. $\frac{\sin A}{a} = \frac{\sin B}{b}$

c. $c^2 = a^2 + b^2$

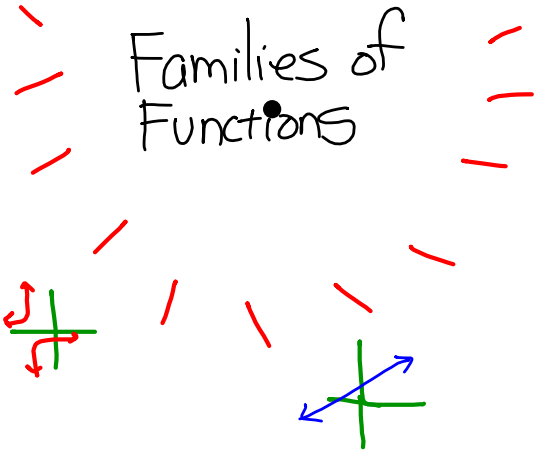
d. $c^2 = a^2 + b^2 - 2ab\cos C$

1. Law of Cosines
2. Law of Sines
3. Pythagorean Theorem
4. Quadratic Formula

Learning is always easier if one can initially make a connection to what you already know



Families of Functions



Aim

Determine whether relationships given in tables and situations are linear or not.

background first

Parameters give the function it's shape.

$y = mx + b$ $\quad y = \frac{1}{x-h}$ $\quad y = ax^2 + bx + c$

What do all functions in the family

$y = mx + b$

have in common?

$y = mx + b$ $\quad y = 3x + 2$

x and y ?

x: inputs

y: outputs

m and b

m, b: constants

What effect does m have?

b ?

is $2y + 5x = 7$ linear ?

$y = mx + b$

$-5x \quad -5x$

$\frac{2y}{2} = \frac{-5x}{2} + \frac{7}{2}$

$y = -10 + \frac{3}{2}x$

$y = -\frac{5}{2}x + \frac{7}{2}$ yes linear because it is in the form $y = mx + b$

x	y
7	52
8	56
9	60
10	64

Yes for every increase of 1 x-value the y-value increases by 4

x	y
6	100
9	300
12	600
15	900

NO.
As x increases by 3 y doesn't have a constant change

Activity to determine if a situation is linear.

1. Decide if it is linear or not.
2. If linear, what is it's equation.

Groups to present their findings

- can show something on the doc cam to assist
- or write on the smart board.

a.

Pieces of Bread	*Grams of Fiber*
0	0
1	5
2	10
3	15
4	20

$y = 5x$

b. *Killer Fried Chickens charges $7.00 for a basic bucket of chicken and $0.50 for each additional piece. The input is the number of extra pieces of chicken ordered, and the output is the total cost of the order.*

$y = 0.5x + 7$

c.

x	y
10	0
5	5
3	7
2	8
1	9
0	10

$-5 \quad +5$

$-2 \quad +2$

$\frac{5}{-5} = -1$

$y = -x + 10$

d.

x	y
10	1
5	2
4	2.5
2	5
1	10
0.5	20

5 - 2

4 - 2.5

3 - 3

2 - 5

1 - 10

e. *James planted a bush in his yard. The year he planted it, the bush produced 17 flowers. Each year, the branches of the bush split, so the number of flowers doubles. The input is the year after planting, and the output is the number of flowers.*

f.

x	y
0	−7
2	−2
4	3
6	8
8	13

$y = -\frac{5}{2}x - 7$

Closure

x	y
1	0.5
4	–7
10	–22
15	–34.5

Decide if the relationship is linear.

B.B.

LCQ

On this particular LCQ: If you were absent Friday, you wait to take this tomorrow as long as you come in before school or after school.

Assignment

1 ..... 104 to 110
and finish the back of
today's warm up.

Ch. 1 Test this Thursday