

Week #1

Integers, Fractions, Decimals

Notes

Integers

+/- Same Sign: Add & Keep
Diff. Sign: Subtract

x/÷

Same Sign = +

Diff. Sign = -

Fractions

+/-

Need Common
Denominator

x

Straight Across

÷

K C F
e e e
p p p
h a n
a n g e
i p

Practice:

5.

$$6 + (5 \times 8) \times 4$$

9.

$$-5n + 3(6 + 7n)$$

10.

$$-4 + 7(1 - 3n)$$

Week #2

Solving Equations + Function Notation

Notes:

Steps to Solve:

1. Distribute
2. Like Terms
3. Isolate Variable
4. Check Solution

Equations

Must

Be

Balanced!

Function Notation:

Input

x

Output

$f(x) \approx y$

Practice:

4.

$$\begin{array}{r} 4s - 13 = 51 \\ +13 \quad +13 \end{array}$$

$$\frac{4s}{4} = \frac{64}{4}$$

$$\boxed{s = 16}$$

5. $8a - 23 = 5(1 - 4a)$

$$\begin{array}{r} 8a - 23 = 5 - 20a \\ +20a \quad +23 \quad +20a \end{array}$$

$$\frac{28a}{28} = \frac{28}{28}$$

$$\boxed{a = 1}$$

11. $f(6) = 4(6) + 2$

$$= 24 + 2$$

$$\boxed{= 26}$$

Week #3

Domain + Range

Notes:

Domain

x

Left to Right

Range

y

Bottom to Top

$$\left\{ \begin{array}{l} \text{Small} < \frac{x}{y} < \text{Big} \\ \underline{\leq} & \underline{\leq} \end{array} \right\}$$

$\angle : 0$

$\underline{\leq} : \bullet$

$\infty : \text{Infinity}$

Practice:

2.

$$-1 < x \leq 1$$

$$-1 < y \leq 5$$

8.

$$-4 < x \leq 4$$

$$-2 \leq y \leq 2$$

Week #4

Slope + Slope-Int.

Slope 3-ways

Table	Point	Graph
$\frac{\Delta y}{\Delta x}$	$\frac{y_2 - y_1}{x_2 - x_1}$	$\frac{\text{rise}}{\text{run}}$

$$y = mx + b$$

↑ slope
↑ y-int

or (0, b)

Practice:

4.

$$\frac{\text{rise}}{\text{run}} = \frac{1}{1} = -1$$

line goes left

2.

$$y = -1x - 1$$

$$7. y = 1x - 4$$

Week #5

Graphing + Transformations

$$a f(bx - h) + k$$

↑ Stretch / Compress
↑ Horiz. Left/Right
↑ UP/Down

Graphing

1. Start @ b
2. Do $\frac{\text{rise}}{\text{run}}$

Ex.

1. $4f(x-2)$

Right 2
vertical
Stretch

2. $f(x+7)$

Left 7

3. $f(x)+9$

UP 9

Week # 6

Standard Form

$$Ax + By = C$$

- No fract. / decimals

- "A" must be "+"

- A, B, C are just #'s

Intercepts

x-int

Zero, root, solution

$$\boxed{\text{Set } y = 0}$$

y-int

$$\boxed{\text{Set } x = 0}$$

Ex.

Week # 7

Point-slope

$$y - y_1 = m(x - x_1)$$

You must have

1. Point
 (x_1, y_1)

2. Slope
 m

Ex.

Week # 8

Parallel / Perpendicular

*

Parallel

SAME

SLOPE

*

Perpendicular

Opposite

Reciprocal

(Flip)

Slope

Ex.