

Order of Operations

with
evaluating expressions

GLUE

COMBINING

LIKE

Terms

(Simplifying Algebraic Expressions)

help each other.
Clean up after yourself.
TREAT OTHERS KINDLY.
Do the right thing.
Share everything.
TELL THE TRUTH.
Never give up.
DO YOUR BEST. Always.
Ask LOTS of questions.
say please & thank you.
work hard. play fair.
DON'T WHINE.

ALGEBRAIC

WORDS & SYMBOLS

P

Any Grouping Symbols
(), [], { }

E

$3^4 = 3 \cdot 3 \cdot 3 \cdot 3$

M

D

Left \rightarrow Right
 $16 \div 3 = 4$
1st

A

S

Left \rightarrow Right
 $12 - 6 + 5 - 2$
1st

Simplify Algebraic Expressions/ Equations (ADD LIKE TERMS)

term	$6x$	x^2
coefficient	6	1

Like Terms:

1. same variable
2. same exponent
3. add/subtract exponents
do not change

Like Terms	$10x^2, 4x^2$	$-3x, 5x$	$6, -8$
Unlike Terms	$6x, x^2$	$3x, 4y$	x^5y, xy^5

+ Addition
sum
plus
more than

- Subtraction
difference
less than *

x Multiplication
product
twice, double =
triple

÷ Division
Quotient
equal parts

Equal: same as, is

A) $64 \div 4 \cdot 2 + 3[2 - (10 - 12)]$
 $64 \div 4 \cdot 2 + 3[2 - (-2)]$
 $16 \cdot 2 + 3[4]$
 $32 + 12 = 44$

B) $\frac{6 - (6 - 10)^2}{-3^2 + 2}$ Alpha
 $\frac{10}{7}$ enter

C) $2x - y(4x - 6)$; for
 $x = -2$ and $y = 5$
 $2(-2) - 5(4(-2) - 6)$
 66

D) $\frac{-2x + 4}{x^2 - 3}$ for $x = -4$
 $\frac{-2(-4) + 4}{(-4)^2 - 3}$
 $\frac{12}{13}$

A) $2(2x - 3y) - (x - 2y)$
 $4x - 6y - x + 2y$
 $3x - 4y$

B) $5x - 3 - 8x + 4 - x$
 $-4x + 1$

C) $6x - 4 - (3x + 2)$
 $3x - 6$

D) $16x - 14 + 4(3x + 2)$
 $28x - 6$

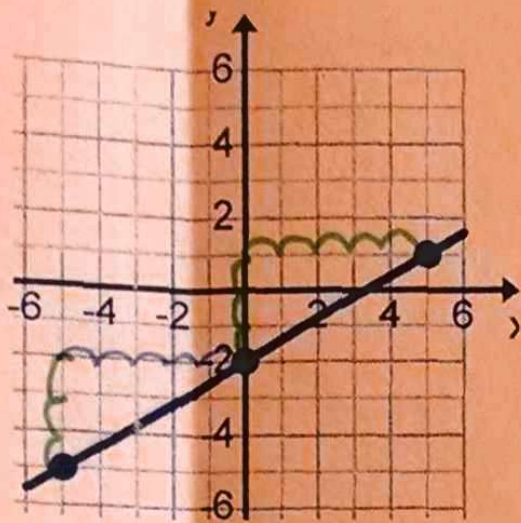
A) Thirty-two is 7 less than
 3 times a number.
 $32 = 3x - 7$

B) Twice a number is 8
 more than the number.
 $2x = 8 + x$

C) Ten more than 6 times
 Harold's age is the same as
 4 times his age increased by
 40.
 $6x + 10 = 4x + 40$

D) The sum of Bob and
 Pat's age is 20. Bob is 4
 years older than Pat.
 Write an equation for
 Bob's age.
 Bob: $P + 4$
 Pat: P
 $(P + 4) + P = 20$
 $2P + 4 = 20$

Slope



$$\frac{\text{Rise}}{\text{Run}} = \frac{3}{5}$$

$$x_1, y_1 \quad \text{and} \quad x_2, y_2$$

$$(10, -4) \quad \text{and} \quad (-2, 2)$$

$$\frac{\Delta Y}{\Delta X} = \frac{y_2 - y_1}{x_2 - x_1}$$

$$\frac{2 - (-4)}{-2 - 10} = \frac{6}{-12}$$

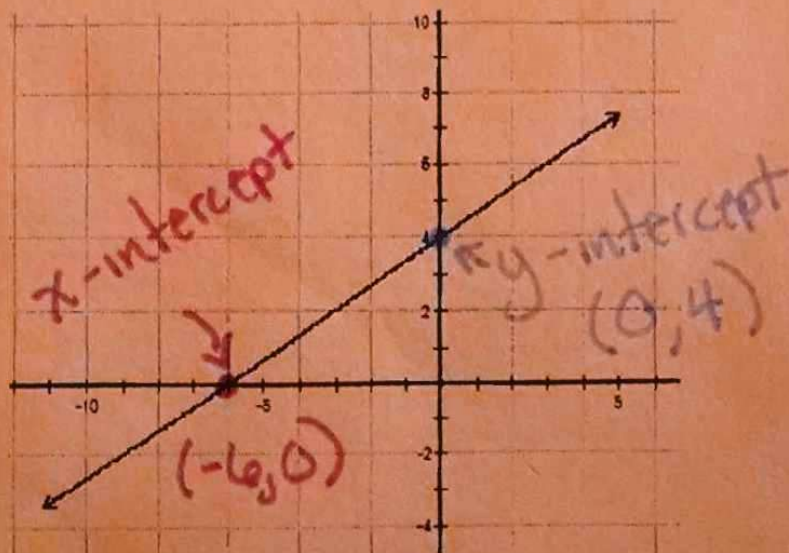
$$-\frac{1}{2}, -\frac{1}{2}, -\frac{1}{2}$$

X - INTERCEPT

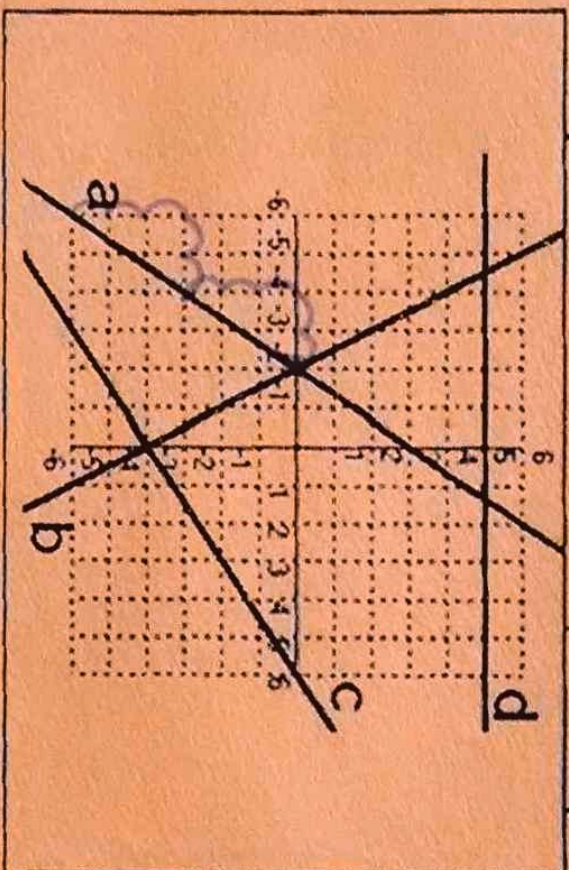
$$(x, 0)$$

Y - INTERCEPT

$$(0, y)$$



GLUE HERE



	x-intercept	y-intercept	slope
a. line a	$(-2, 0)$	$(0, 3)$	$3/2$
b. line b	$(-2, 0)$	$(0, -4)$	$-2/1 = -2$
c. line c	$(6, 0)$	$(0, -4)$	$2/3$
d. line d	none	$(0, 5)$	0