



Negative Numbers & The Coordinate Plane: Notes

Negative Numbers:

Negative Number: - a real number that is less than 0
- represented by a dash (-) behind the negative number

Example: -1, -3, -4

Order of Negative Numbers:

- just like how positive (ex.: 4) numbers move to the right as they get bigger, negative numbers move to the left (you count backwards with negatives)



Number opposites:

- Now, since you know what negative numbers are, you can easily identify the opposite of a number
 - ↳ If the number is positive, add a '-' and make it negative
 - ↳ If the number is negative, get rid of the '-' and make it positive

Example: opposite of 2 = -2

opposite of -69 = 69

Absolute value:

Absolute value: the distance a given number is away from 0

-represented by $| |$

(the absolute value of x)

$|x|$ where x = any real number

Finding the absolute value:

- The absolute value is always the number inside the absolute value lines, NOT the positive/negative signs
↳ because EX: $|-2| = 2$ → 2 is still 2 units away from 0
 $|3| = 3$ → 3 is still 3 units away from 0

But ...

-if the $-$ is outside the absolute value bars, then the answer is negative

Example: $-|68| = -68$

Operations with Negative Numbers:

With operations w/ negative numbers:

Remember -

a	$+$	and	a	$+$	$= a$	$+$
a	$-$	and	a	$-$	$= a$	$+$
a	$+$	and	a	$-$	$= a$	$-$
a	$-$	and	a	$+$	$= a$	$-$

Addition & subtraction:

- Find the right symbols, then add or subtract as usual

Examples: $-2 + 3 = 1$

↳ since there is a $+$ and $-$ you would subtract $(-)$ according to the rule above
 ↳ it is recommended to add or subtract regularly and not count as there will be problems with much larger numbers in the future

$$-61 - 7 = -68$$

↳ there is a $-$ and a $-$ which means that you would add the numbers
 ↳ BUT the answer would still be negative because you are technically subtracting from a negative



Multiplication & Division:

- Multiply or divide as usual and use the rules above as the symbol you would put in front of the answer

Examples: $-6 \times 7 = -42$

↳ multiply as usual
 ↳ $-$ and $+$ is $-$, so answer is negative

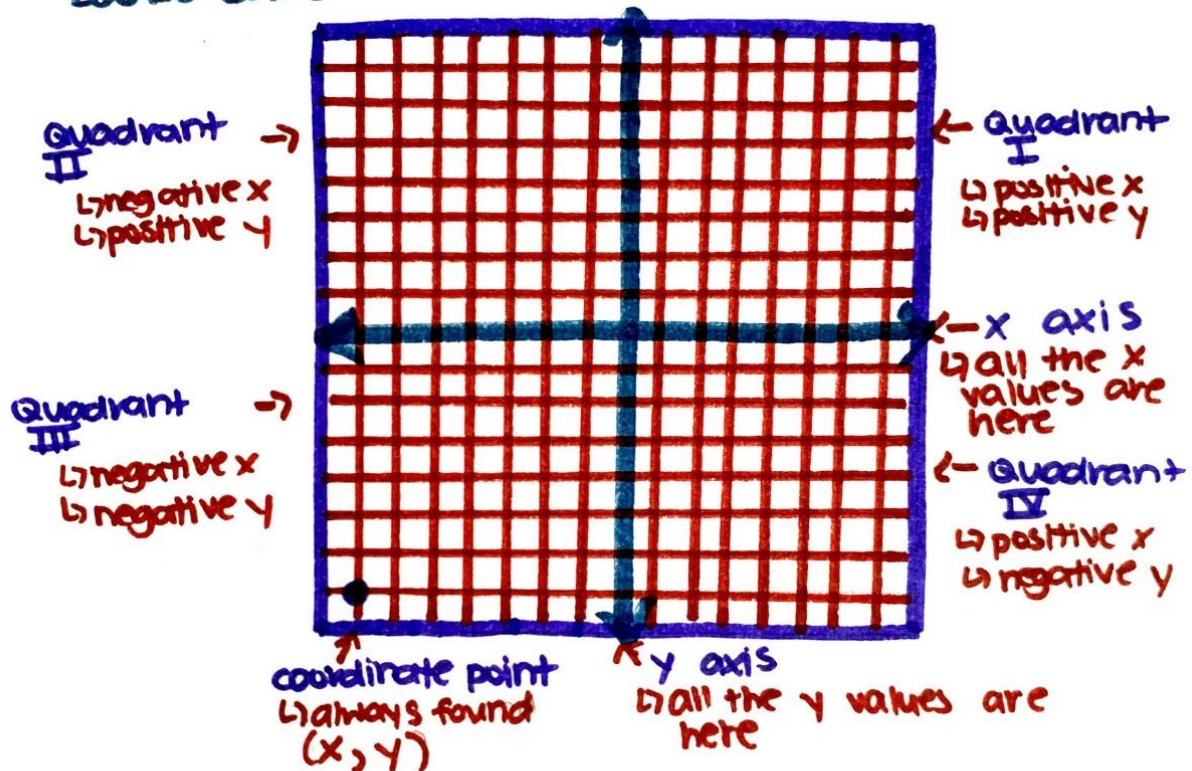
$$-42 \div -7 = 6$$

↳ divide as usual
 ↳ $-$ and $-$ is $+$, so answer is positive

The coordinate plane:

coordinate plane: place where you graph/plot points

LOOKS LIKE:



*To plot a point on the coordinate plane,
you first go to the x value, then up
to the y value
(think: across, up, across)