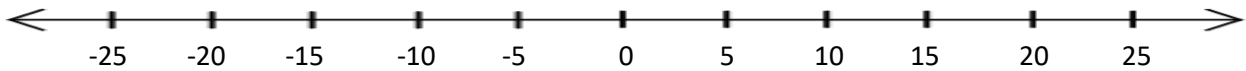


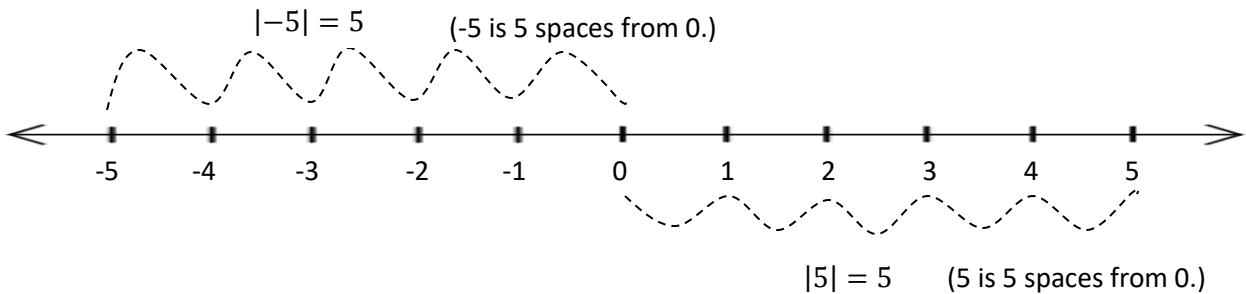
Signed Numbers Cheat Sheet



Negative Numbers
 *numbers are bigger
 when they are closer to
 zero*
 $-5 > -8$

Positive Numbers
 *numbers are bigger
 when they are further
 away from zero*
 $5 < 8$

Absolute Value is the distance of a number from 0.



Multiplying/Dividing Signed Numbers

When you have 2 numbers with the same sign, your answer will be positive.

$(-) \times (-) = (+)$ $-2 \times -3 = 6$	$(-) \div (-) = (+)$ $-6 \div -2 = 3$
$(+) \times (+) = (+)$ $2 \times 3 = 6$	$(+) \div (+) = (+)$ $6 \div 2 = 3$

When you have one positive and one negative number, your answer will be negative.

$(-) \times (+) = (-)$ $-2 \times 3 = -6$	$(-) \div (+) = (-)$ $-6 \div 2 = -3$
$(+) \times (-) = (-)$ $2 \times -3 = -6$	$(+) \div (-) = (-)$ $6 \div -2 = -3$

Same signs = positive
Different signs = negative

Adding/subtracting Signed Numbers

1. Adding two negatives:

- add the two numbers
- add a negative sign

$$-4 + (-12) = -16 \longrightarrow 4 + 12 = 16$$

Add the two numbers

Add a negative sign

2. Adding a negative and a positive:

- Subtract the two numbers
- Add the sign of the number with the biggest absolute value

$$8 + (-3) = 5 \longrightarrow 8 - 3 = 5$$

Subtract the two numbers

Add sign of the bigger number

$$7 + (-8) = -1 \longrightarrow 8 - 7 = -1$$

Subtract the two numbers

Add sign of the bigger number

3. Subtracting signed numbers:

- Change subtraction to addition
- Change the sign of the second number to the opposite
- Proceed as addition problem

$$-9 - 15 = -24 \longrightarrow -9 + (-15) = -24$$

Change to addition

Change sign to opposite

$$-5 - (-7) = 2 \longrightarrow -5 + (+7) = 2$$

Change to addition

Change sign to opposite

$$10 - (-6) = 16 \longrightarrow 10 + (+6) = 16$$

Change to addition

Change sign to opposite