

Rational Number ~~Integer~~ Subtraction

Key
#9

Review of addition of integers...

$$-4 + -8 = \underline{-12}$$

$$7 + -20 = \underline{-13}$$

$$10 + -16 = \underline{-6}$$

$$-3 + -4 + 14 = \underline{7}$$

$$-3 + 11 = \underline{8}$$

$$-8 + 15 = \underline{7}$$

$$-18 + -5 = \underline{-23}$$

$$14 + -16 + 16 + -14 = \underline{0}$$

Subtraction of Integers

- You probably are asking why we did so much with addition of integers. Well... the reason is because whenever we see a subtraction problem, it really means to "add the opposite of the second integer"!!!

- Let's practice finding the opposites...

✓ What is the opposite of $3\frac{1}{2}$? $-3\frac{1}{2}$

✓ What is the opposite of -4.3 ? $+4.3$

✓ What is the opposite of 0 ? 0

- The RULE for subtracting integers is to "add the opposite of the second number and then follow the rules for addition"... Here's a little ditty to help you remember...

*Add the opposite
Is what you must do
When subtraction of Integers
Is asked of you
Follow the rules for addition after that
And you'll have the answer down pat!*

Examples are below...

✓ $(-5) - (-2)$ means -5 and the opposite of -2 ...

This becomes $-5 + +2$ and equals -3 .

✓ $(-3) - (+7\frac{1}{4})$ means -3 and the opposite of $+7\frac{1}{4}$

This becomes $-3 + -7\frac{1}{4}$ and equals $-10\frac{1}{4}$

Try these...

Original Subtraction Problem	Changed to an Addition Problem	Answer
$8 - -3\frac{3}{4}$	$8 + +3\frac{3}{4}$	$11\frac{3}{4}$
$-6 - 5$	$-6 + -5$	-11
$-11.6 - -7$	$-11.6 + +7$	-4.6
$-20\frac{1}{2} - 13$	$-20\frac{1}{2} + -13$	$-33\frac{1}{2}$
$5 - -5.7$	$5 + +5.7$	10.7
$-16 - 4$	$-16 + -4$	-20
$-18\frac{1}{4} - -5$	$-18\frac{1}{4} + +5$	$-13\frac{1}{4}$
$12 - 4$	$12 + -4$	8