

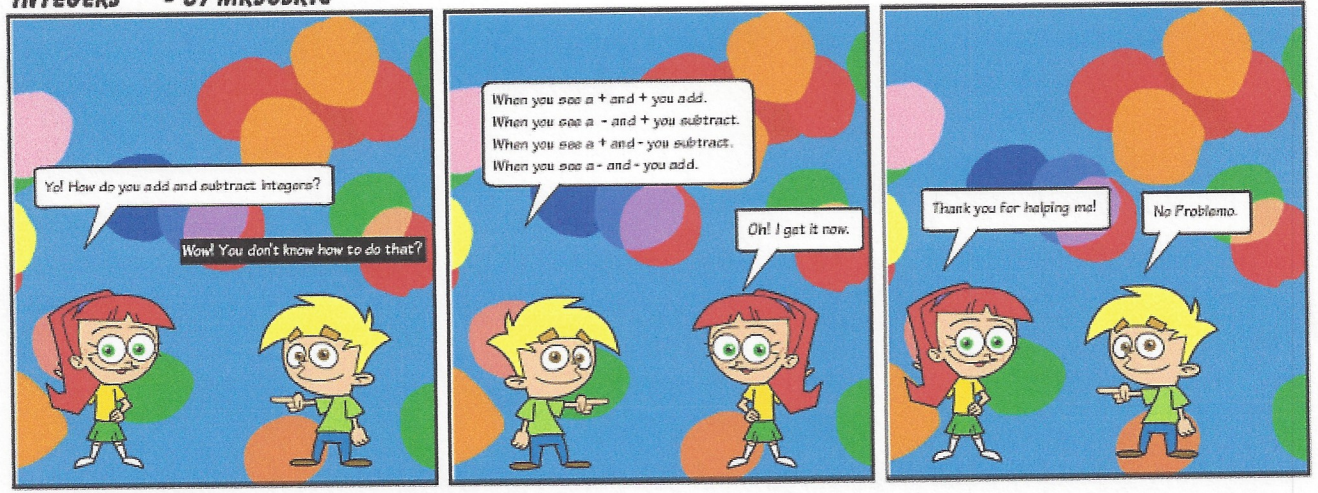
Notes: Integer Operations

+ - × ÷

Adding & Subtracting Integers

INTEGERS - BY MRSOSKIL

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Adding

Integers with the same sign: Add them and keep the same sign.

Positive + positive = positive

negative + negative = negative

Practice: $3 + 6 = \underline{\quad}$ $-4 + -7 = \underline{\quad}$ $-12 + -15 = \underline{\quad}$
 $-2 + -11 = \underline{\quad}$ $9 + 13 = \underline{\quad}$ $-8 + -19 = \underline{\quad}$

Integers with different signs: Subtract the numbers then, give the answer the sign of the number with the larger absolute value.

positive + negative	$5 + -9 =$	subtract $ -9 - 5 = 4$	sign of larger # -4
negative + positive	$-8 + 6 =$	subtract $ -8 - 6 = 2$	sign of larger # -2

Practice: $2 + -4 =$ _____ $5 + -7 =$ _____ $9 + -6 =$ _____
 $-4 + 3 =$ _____ $-10 + 8 =$ _____ $-9 + 16 =$ _____

To add more than 2 integers, follow these steps:

- 1) Add all of the positive integers together.
- 2) Add all of the negative integers together.
- 3) Add these 2 sums together using the rules for adding unlike signs.

Practice: $3 + (-7) + 9 =$ _____ $-8 + 4 + -6 =$ _____

$-5 + -6 + 1 + 9 + -13 + 4 + -8 + 2 =$ _____

$14 + 3 + -11 + -7 + -2 + 6 + -4 + -1 =$ _____

$(4 + -9 + 3) + -7 + 2 + -15 + (-8 + 9 + -5) + -6 =$ _____

Subtracting

To subtract integers you add the 2nd number's opposite.

Then follow the rules for addition.

Leave, Change, Opposite

Leave : leave the sign of the 1st number

Change: change the operation (add to subtract, subtract to add)

Opposite: take the opposite sign of the 2nd number

example	leave	change	opposite	result
$5 - (-3)$	leave the +5	change the operation to +	take the opposite of -3 which is 3	$5 + (+3) = 8$
$-9 - (-2)$	leave the -9	change the operation to +	take the opposite of -2 which is 2	$-9 + (+2) = -7$
$-3 - 5$	leave the -3	change the operation to +	take the opposite of 5 which is -5	$-3 + (-5) = -8$

Practice:

$6 - (-2) = \underline{\hspace{2cm}}$

$7 - (-9) = \underline{\hspace{2cm}}$

$12 - (-8) = \underline{\hspace{2cm}}$

$-8 - (3) = \underline{\hspace{2cm}}$

$-5 - (-6) = \underline{\hspace{2cm}}$

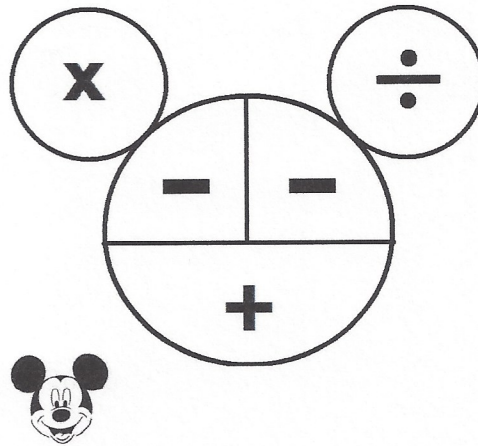
$-1 - (-4) = \underline{\hspace{2cm}}$

$-2 - 7 = \underline{\hspace{2cm}}$

$-13 - 7 = \underline{\hspace{2cm}}$

$-19 - (-3) = \underline{\hspace{2cm}}$

Multiplying & Dividing Integers



Multiplying

Same signs = positive

Different signs = negative

Multiplying Integers Rules

+	x	+	=	+
-	x	-	=	+
+	x	-	=	-
-	x	+	=	-

Same Sign = Positive. Different Sign = Negative.

Practice:

$5 \cdot 12 = \underline{\quad}$

$8 \cdot 9 = \underline{\quad}$

$7 \cdot 13 = \underline{\quad}$

$-4 \cdot -9 = \underline{\quad}$

$-15 \cdot -5 = \underline{\quad}$

$-7 \cdot -11 = \underline{\quad}$

$8 \cdot -14 = \underline{\quad}$

$-6 \cdot 20 = \underline{\quad}$

$16 \cdot -4 = \underline{\quad}$