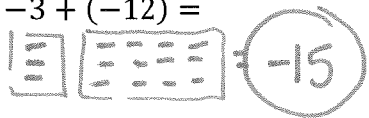# NOTES 1.2: Adding Integers

Example #1: Adding Integers with the SAME SIGN

Algorithm (rule): _Add the absolute values of the integers. Then use the common sign._

1. $-3 + (-12) =$ -15

Use chips if you need to!

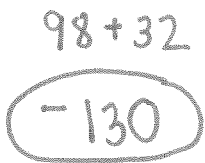2. $-20 + (-5) =$ -25

Add $|-20| + |-5|$
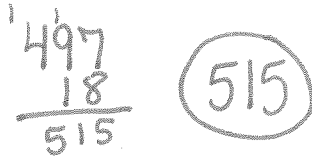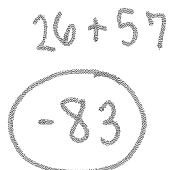$20 + 5 = 25$ ← use common sign

3. $-23 + (-57) =$ -80

On Your own

1. $-98 + (-32) =$
$98 + 32$
-130

2. $497 + 18 =$
497
18
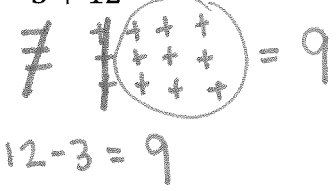515 515

3. $-26 + (-57) =$
$26 + 57$
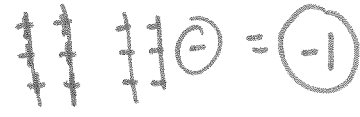-83

Example #2: Adding Integers with DIFFERENT SIGNS

Algorithm (rule): _Ignore the signs and subtract the #'s. Then use the sign of the integer with the greater absolute value._
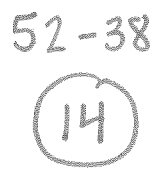
1. $-3 + 12 =$ $= 9$
$12 - 3 = 9$

Use chips if you need to!

2. $6 + (-7) =$ $= -1$
$7 - 6 = -1$ ← keep the sign of the larger #

3. $-52 + (-38) =$ **FIX**
$52 - 38$
14

52
-38
14

On Your own
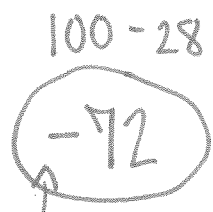
1. $-100 + 28 =$
$100 - 28$
-72
← Keep the sign of the larger #

2. $79 + (-12) =$
$79 - 12$
67
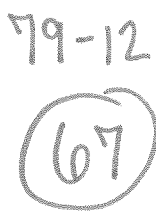
3. $-23 + 8 =$
$23 - 8$
-15
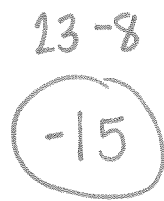
Example 3: <u>Adding More than Two Integers</u> (inverted pyramid)

The list shows four bank account transactions in July. Find the changes C in the account balance.

July Transactions	
Withdrawal	−$40
Deposit	$50
Deposit	$75
Withdrawal	−$50

Find the sum of the four transactions.

$C = -40 + 50 + 75 + (-50)$

$-40 + 75 + 50 + (-50)$

$-40 + 75$

$\boxed{\$35}$

The account increased $35 in July.

On Your Own

1. $-19 + 34 + (-12)$

$-19 + (-12) + 34$

$-31 + 34$

$\boxed{3}$

2. $96 + (-32) + 16 + (-88)$

$96 + 16 + (-32) + (-88)$

$112 + (-120)$

$\boxed{-8}$

Example #4: <u>Evaluating Expressions</u>

Evaluate the expression when $a = -9, b = 3, c = -4$

1. $a + c$

$-9 + (-4)$

$\boxed{-13}$

2. $a + b^2 + 2b$

$-9 + 3^2 + 2(3)$

$-9 + 9 + 6$

$0 + 6$

$\boxed{6}$