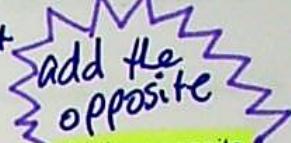Objectives: I can solve problems by subtracting integers.

Subtracting Integers

Addition is the same as subtracting the opposite.

$\circlearrowright$ 7 + (-4) = 3 *last night*
7 – 4 = 3 *tonight*

$\circlearrowright$ 8 + (-2) = 6 *last night*
8 – 2 = 6 *tonight*

add the opposite

Let's not have to memorize a bunch of rules! Subtracting integers just requires you to **add the opposite.**
Change the subtraction sign to addition; change the sign of the next number. (Never change the number before the subtraction sign.)

Examples:
10 – (-4) =
10 + (+4) = 14

-6 – 5 =
-6 + (-5) = -11

3 – 9 =
3 + (-9) = -6

Practice Rewrite the subtraction problems below as addition problems, then solve.

-7 + (-3)
1) –7 – 3 __–10__

12 + (-23) $\frac{23}{12}$
2) 12 – 23 __–11__

15 + 3
3) 15 – (-3) __18__

-28 + 8
4) –28 – (-8) __–20__

-2 + (-98)
5) –2 – 98 __–100__

-63 + 12
6) –63 – (-12) __–51__ $\frac{-63}{-12}$ / $\frac{51}{}$

14 + 9
7) 14 – (-9) __23__

-4 + (-15)
8) –4 – 15 __–19__

9) 5 – 8 – (-4) __1__

Combine Negatives
10) –2 – 5 – (-7) __0__
-2 + (-5) + (7)   (-7) + (7)

Combine positives
5 + (-8) + (4)
9 + (-8)

Write a numerical expression for each situation and then simplify.

11) Terry has $43 in a checking account. If Terry writes a check for $62, what is the new account balance?

$\frac{62}{-43}$ / $\frac{}{19}$ 43 – 62 = 43 + (-62) = –19

12) Suppose you score 35 points in a game but then you get a 50 point penalty. What is your new score?

35 – 50 = 35 + (-50) = –15

Evaluate each expression if $m = -2$, $n = 3$, and $p = -6$.

13) m – p
$(-2) - (-6)$
$-2 + 6$
$\boxed{4}$

14) p – n – m
$(-6) - (3) - (-2)$
$-6 + (-3) + (2)$
$-9 + 2$
$\boxed{-7}$

15) 2n – m
$2(3) - (-2)$
$6 - (-2)$
$6 + 2$
$\boxed{8}$