Alg 1A
2.4 Subtracting integers

Subtract integers
Use SMATO to add integers

integer
smato
difference

Find each difference.

1 6 + ⁻4

subtract 4, add −4.

$6 + -4 = 2$

2 −5 − (−3)

To subtract −3, add 3.

$-5 + +3 = -2$

$-3 - (6)$

$-3 + -6 = -9$

3 −3 − 2

To subtract 2, add −2.

$-3 + -2 = -5$

4 4 − (−1)

subtract −1, add 1.

$4 + +1 = 5$

$4 + 1$

$4 + ^4 1$

5 2 − 5

To subtract 5, add −5.

$2 + -5 = -3$

6 −3 − (−6)

To subtract −6, add 6.

$-3 + 6 = 3$

Your Turn

a. 9 − 3   b. −7 − (−2)   c. −8 − 3
d. 5 − (−1)   e. −4 − 6   f. −7 − (−11)

7 Evaluate $x - y$ if $x = -2$ and $y = 1$.

with 1.
−1).

$2-(^+1)$

$(-2)+(-1) = -3$

$= -3$

$−2 + (−1) = −3$

− +

$2+^-1$

$(6)+(+2)+(-6) = 2$

and c with −6.

$= 8 + (-6)$

$8 + 2 = 8$

$= 2$

$8 + (−6) = 2$

$^-5--7$

$5+ +3 = 8$

Your Turn

g. Evaluate $m - n$ if $m = 5$ and $n = -3$.
h. Evaluate $w - x + y - z$ if $w = -5$, $x = -7$, $y = 10$, and $z = -5$.

$-5--7+10--5$
$-5+7+10+5 = 17$

9 The map shows the number of people who moved to Ohio from Indiana in a recent year. It also shows the number of people who left Ohio for Indiana. The change in Ohio's population p can be found by using the formula $p = m - l$, where m is the number of people moving to Ohio and l is the number of people leaving Ohio.

INDIANA
9645
OHIO
12,395
WEST VIRGINIA
KENTUCKY

$9645 - 12395$

$p = 9645 + ^-12{,}395$

Find the net change in Ohio's population resulting from people moving to and from Indiana.

$= -2750$

Sample: $4 - (-3)$ **Solution:** $4 + 3$

3. $10 + {}^-3$ **4.** $-2 + (+5)$ **5.** $-4 + {}^-8$

Find each difference. *(Examples 1–6)*

6. $8 + {}^-2 = 6$ **7.** $-6 + (+4) = -2$ **8.** $-5 + {}^-4 = -9$

9. $7 + (+4) = 11$ **10.** $8 + {}^-11 = -3$ **11.** $-4 + (+9) = 5$

Evaluate each expression if $a = -2$, $b = 6$, $c = -3$, and $d = -1$.
(Examples 7 & 8)

12. $a - b$ **13.** $b - c + d$

14. Population In a recent year, 5899 people moved to Ohio from West Virginia, and 5394 people left Ohio for West Virginia. Find the net change in Ohio's population. *(Example 9)*