# Integer Rules

## dding Integers Using Absolute Values

Find each sum.

**A** $-7 + (-4)$

The signs are the **same**. Find the **sum** of the absolute values.

$-7 + (-4)$ *Think: 7 + 4 = 11.*
$-11$ *Use the sign of the two integers.*

**B** $-8 + 6$

The signs are **different**. Find the **difference** of the absolute values.

$-8 + 6$ *Think: 8 − 6 = 2.*
$-2$ *Use the sign of the integer with the greater absolute value.*

## Subtracting Integers by Adding the Opposite

Find each difference.

**A** $5 - 9$

$5 - 9 = 5 + (-9)$ *Add the opposite of 9.*
$= -4$

**B** $-9 - (-2)$

$-9 - (-2) = -9 + 2$ *Add the opposite of −2*
$= -7$

**C** $-4 - 3$

$-4 - 3 = -4 + (-3)$ *Add the opposite of 3.*
$= -7$

## Multiplying and Dividing Two Integers

| If the signs are: | | Your answer will be: |
|---|---|---|
| the same | → | positive |
| different | → | negative |

### Multiplying Integers

Find each product.

**A** $-4 \cdot (-2)$

$-4 \cdot (-2)$ *Both signs are negative, so the product is positive.*
$8$

**B** $-3 \cdot 6$

$-3 \cdot 6$ *The signs are different, so the product is negative.*
$-18$

### Dividing Integers

Find each quotient.

**A** $72 \div (-9)$ *The signs are different, so the quotient is negative.*

$72 \div (-9)$
$-8$

**B** $-100 \div (-5)$ *The signs are the same, so the quotient is positive.*

$-100 \div (-5)$
$20$