

Chapter 1 Integers

Idea and Examples Chart

1–6. Sample answers are given.

1. Integers: $\dots, -3, -2, -1, 0, 1, 2, 3, \dots$

- Example
 -586
- Example
 0
- Example
 16

2a. Adding integers with the same sign:
Add the absolute values of the integers.
Then use the common sign.

- Example
 $16 + 17 = 33$
- Example
 $-5 + (-4) = -9$
- Example
 $-55 + (-45) = -100$

2b. Adding integers with different signs:
Subtract the lesser absolute value from the
greater absolute value. Then use the sign of
the integer with the greater absolute value.

- Example
 $8 + (-2) = 6$
- Example
 $-8 + 2 = -6$
- Example
 $-97 + 19 = -78$

3. Additive Inverse Property: The sum of an
integer and its *additive inverse*, or *opposite*, is 0.

- Example
 $5 + (-5) = 0$
- Example
 $-100 + 100 = 0$
- Example
 $16 + (-16) = 0$

4. Subtracting integers: To subtract an integer,
add its opposite.

- Example
 $1 - 4 = 1 + (-4) = -3$
- Example
 $-1 - (-4) = -1 + 4 = 3$
- Example
 $1 - (-4) = 1 + 4 = 5$

Chapter 1 (continued)

5a.

Multiplying integers with the same sign: The product of two integers with the same sign is positive.

Example

$$6 \cdot 3 = 18$$

Example

$$-6 \cdot (-3) = 18$$

Example

$$-18(-16) = 288$$

5b.

Multiplying integers with different signs: The product of two integers with different signs is negative.

Example

$$6 \cdot (-3) = -18$$

Example

$$-6 \cdot 3 = -18$$

Example

$$18(-16) = -288$$

6a.

Dividing integers with the same sign: The quotient of two integers with the same sign is positive.

Example

$$100 \div 4 = 25$$

Example

$$-100 \div (-4) = 25$$

Example

$$\frac{-98}{-7} = 14$$

6b.

Dividing integers with different signs: The quotient of two integers with different signs is negative.

Example

$$100 \div (-4) = -25$$

Example

$$-100 \div 4 = -25$$

Example

$$\frac{-98}{7} = -14$$