2.4

Operations with Integers

Lesson Objective
• Use addition, subtraction, multiplication, and division with integers
Use Addition, Subtraction, Multiplication, and Division with Integers.

The order of operations for integers is the same as the order of operations for whole numbers, fractions, and decimals.

**STEP 1** For expressions involving parentheses, evaluate expressions within parentheses first.

**STEP 2** Evaluate exponents.

**STEP 3** Working from left to right, perform multiplication and division.

**STEP 4** Working from left to right, perform addition and subtraction.

\[-13 + (-4) \cdot (2 - 10) + 8\]

\[-13 + (-4) \cdot (-8) + 8\]

\[-13 + 32 + 8\]

\[19 + 8\]

\[27\]
Guided Practice
Evaluate each expression.

1. \[14 + 8 - 9 \cdot 6\]
   \[14 + 8 = 54\]
   \[54 - 54\]
   \[\boxed{-32}\]

2. \[(-25 - 5) \div 6 - 21\]
   \[\boxed{-30}\]
   \[\boxed{-5 - 21}\]
   \[\boxed{-26}\]

3. \[-14 - (3 + 3) \cdot 2\]
   \[-14 - 6 \cdot 2\]
   \[-14 - 12\]
   \[-14 + -12\]
   \[\boxed{-26}\]
\[ (-4)^2 \text{ base} \]

\[ -4 \cdot -4 = 16 \]

\[ -4^2 = -1 \cdot 4^2 \]

\[ = -1 \cdot 16 \]

\[ = -16 \]