

UNIT 1 • RELATIONSHIPS BETWEEN QUANTITIES

Lesson 1: Interpreting Structure in Expressions

Instruction

Example 2

A smartphone is on sale for 25% off its list price. The sale price of the smartphone is \$149.25. What expression can be used to represent the list price of the smartphone? Identify each term, coefficient, constant, and factor of the expression described.

1. Translate the verbal expression into an algebraic expression.

Let x represent the unknown list price. Describe the situation. The list price is found by adding the discounted amount to the sale price:

sale price + discount amount

The discount amount is found by multiplying the discount percent by the unknown list price. The expression that represents the list price of the smartphone is $149.25 + 0.25x$.

2. Identify all terms.

There are two terms described in the expression: the sale price of \$149.25, and the discount of 25% off the list price, or 149.25 and $0.25x$.

3. Identify the factors.

$0.25x$ is the product of the factors 0.25 and x .

4. Identify all coefficients.

0.25 is multiplied by the variable, x ; therefore, 0.25 is a coefficient.

5. Identify any constants.

The number that does not change in the expression is 149.25 ; therefore, 149.25 is a constant. ✓