Module 3   Integers
Lesson 5   Solving Problems with Integers

Lesson Objective

- Read, write, compare, and solve problems involving integers with or without appropriate technology.

Subtopic 1   **Solving Problems with Integers 1 (Math Camp Swimming Pool)**
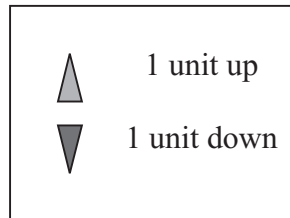
Math Camp Swimming Pool

given amount + change amount
change amount = _____ × time

1 Find how many gallons were in the swimming pool six hours ago if there are currently 21 gallons and the pool is filled at a rate of two gallons per hour.

2 Find how many gallons of water were in a swimming pool six hours ago if there are currently seven gallons of water and the pool is drained at a rate of three gallons per hour.

3 The pool holds 12,000 gallons of water. Two thousand gallons can be drained every hour. Find out how long it will take to drain the pool.

4 The pool can hold 12,000 gallons of water and is currently empty. Every hour, 1200 gallons are pumped into the pool. How long will it take to refill the pool?

Zeo's Alienoon

Zeo's alienoon (like a hot-air balloon) is tied somewhere above ground to a platform labeled zero.

- Distances _____ the platform are given as _____ integers.
- Distances _____ the platform are given as _____ integers.
- The alienoon goes up and down based on how many triangle fuel cells it has.
  _____ fuel cells (yellow–pointing up _____)
  _____ fuel cells (red–pointing down _____**)**

1 unit up

1 unit down

5 The alienoon is at zero and is descending at a rate of three units per hour. Where was it four hours ago?

6 The alienoon starts at zero and descends at a rate of three units per hour for three hours; then it ascends two units per hour for two hours. Where is it?