

NAME \_\_\_\_\_

Module 3    Integers  
Lesson 5    Solving Problems with Integers

# Independent Practice

## 3.5

Solve each problem.

1. A certain crane ascends at a rate of nine units per minute and descends at a rate of six units per minute. If the crane starts at a position of zero units, ascends for two minutes, and descends for six minutes, where is the crane in relation to the starting position?
2. Water is draining out of a pond at a rate of 85 gallons per hour. Currently, the pond has 16,000 gallons of water. How many gallons of water did the pond have five hours ago?
3. Radioactive uranium decays in a controlled reactor at a rate of 150 atoms per month. If there are 900 atoms on the first day of June, how many atoms are there on the first day of October?
4. Sarah types 1,400 words for a research paper by 10:20 A.M. If she types at a rate of 45 words per minute, how many words had she typed by 10 A.M.?
5. Coffee drains out of a large coffee pot at a rate of three cups per minute. If there are three cups left in the pot, how many cups were in the pot eight minutes ago?
6. A kite is released 35 units below the position marked as zero units. If the kite ascends at a rate of seven units per second, how many seconds will it take the kite to reach zero units?

## Journal

1. An object ascends at a rate of 15 units per minute and descends at a rate of 12 units per minute. Write and solve a word problem where the object ends up higher than it began.
2. A pool contains 56 gallons of water. Write six different rates (gallons per hour) to empty the pool or to cause there to be zero gallons of water left in the pool. For each of your six answers, write the corresponding multiplication problem.
3. Write eight different multiplication number sentences that equal 28.

## Cumulative Review

**Find the absolute value.**

1.  $|12|$
2.  $|-22|$

**Order the numbers from least to greatest.**

3.  $-5, 2, -3, -6, -1$
4.  $1, -2, 0, -1, 2, 3, -5$

**Add.**

5.  $-4 + (-7)$
6.  $20 + (-6)$

**Subtract.**

7.  $-2 - (-9)$
8.  $-8 - 2$

**Multiply.**

9.  $-4 \times 9$
10.  $-5 \times -7$

**Divide.**

11.  $-18 \div 3$
12.  $-63 \div (-7)$

# Additional Work Area