

48. **MOUNTAIN CLIMBING** A climber on Mount Rainier in Washington hikes from an elevation of 5400 feet above sea level to Camp Muir, which has an elevation of 10,100 feet. The elevation h (in feet) as the climber ascends can be modeled by $h(t) = 1000t + 5400$ where t is the time (in hours). Graph the function, and determine a reasonable domain and range. What is the climber's elevation after hiking 3.5 hours?



49. **EXTENDED RESPONSE** The table shows the populations of several states and their electoral votes in the 2004 and 2008 U.S. presidential elections. The figures are based on U.S. census data for the year 2000.
- Identify the domain and range of the relation given by the ordered pairs (p, v) .
 - Is the relation from part (a) a function? *Explain.*
 - Is the relation given by the ordered pairs (v, p) a function? *Explain.*
50. **CHALLENGE** The table shows ground shipping charges for an online retail store.
- Is the shipping cost a function of the merchandise cost? *Explain.*
 - Is the merchandise cost a function of the shipping cost? *Explain.*

| State | Population (millions), p | Electoral votes, v |
|--------------|----------------------------|----------------------|
| California | 33.87 | 55 |
| Florida | 15.98 | 27 |
| Illinois | 12.42 | 21 |
| New York | 18.98 | 31 |
| Ohio | 11.35 | 20 |
| Pennsylvania | 12.28 | 21 |
| Texas | 20.85 | 34 |

| Merchandise cost | Shipping cost |
|------------------|---------------|
| \$.01–\$30.00 | \$4.50 |
| \$30.01–\$60.00 | \$7.25 |
| \$60.01–\$100.00 | \$9.50 |
| Over \$100.00 | \$12.50 |

MIXED REVIEW FOR TAKS TAKS PRACTICE at classzone.com

REVIEW

Lesson 1.5;
TAKS Workbook

51. **TAKS PRACTICE** Kate is studying a bacteria culture in biology class. The table shows the number of bacteria, b , in the culture after t hours. How many bacteria are there after 10 hours? **TAKS Obj. 10**

| | | | | | | |
|--------------------------|---|---|---|---|----|----|
| Time (hours), t | 0 | 1 | 2 | 3 | 4 | 5 |
| Bacteria (billions), b | 1 | 2 | 4 | 8 | 16 | 32 |

- (A) 64 billion (B) 128 billion (C) 256 billion (D) 1024 billion

REVIEW

TAKS Preparation
p. 470;
TAKS Workbook

52. **TAKS PRACTICE** What is the area of the composite figure? **TAKS Obj. 8**

- (F) 138 cm^2 (G) 141 cm^2
(H) 162 cm^2 (J) 210 cm^2

