

**EXAMPLE 7**

on p. 44  
for Exs. 57–58

57. **LAPTOP COMPUTERS** A computer manufacturer states that its laptop computer can operate within a temperature range of  $50^{\circ}\text{F}$  to  $95^{\circ}\text{F}$ . Write a compound inequality for the temperature range. Then rewrite the inequality in degrees Celsius.
58. **MULTI-STEP PROBLEM** On a certain highway, there is a minimum speed of 45 miles per hour and a maximum speed of 70 miles per hour.
- Write a compound inequality for the legal speeds on the highway.
  - Write a compound inequality for the illegal speeds on the highway.
  - Write each compound inequality from parts (a) and (b) so that it expresses the speeds in kilometers per hour. ( $1 \text{ mi} \approx 1.61 \text{ km}$ )
59. **EXTENDED RESPONSE** A math teacher announces that grades will be calculated by adding 65% of a student's homework score, 15% of the student's quiz score, and 20% of the student's final exam score. All scores range from 0 to 100 points.
- Write Inequalities** Write an inequality for each student that can be used to find the possible final exam scores that result in a grade of 85 or better.
  - Solve** Solve the inequalities from part (a).
  - Interpret** For which students is a grade of 85 or better possible? *Explain.*

Name	Homework	Quiz	Exam
Amy	84	80	$w$
Brian	80	100	$x$
Clara	75	95	$y$
Dan	80	90	$z$

60. **CHALLENGE** You are shopping for single-use cameras to hand out at a party. The daylight cameras cost  $\$2.75$  and the flash cameras cost  $\$4.25$ . You must buy exactly 20 cameras and you want to spend between  $\$65$  and  $\$75$ , inclusive. Write and solve a compound inequality for this situation. Then list all the solutions that involve whole numbers of cameras.



## MIXED REVIEW FOR TAKS

**TAKS PRACTICE** at classzone.com

**REVIEW**

Skills Review  
Handbook p. 998;  
TAKS Workbook

61. **TAKS PRACTICE** Steve has 6 fewer trading cards than Kevin. Thomas has twice as many trading cards as Steve. The three students have a total of 22 trading cards. Which equation can be used to find the number of trading cards that Kevin has? **TAKS Obj. 10**

- (A)  $x - 6x + \frac{1}{2}x = 22$   
 (B)  $x + (x - 6) + 2x = 22$   
 (C)  $x + (x - 6) + 2(x - 6) = 22$   
 (D)  $2x + (x - 6) + (x - 6) = 22$

**REVIEW**

TAKS Preparation  
p. 970;  
TAKS Workbook

62. **TAKS PRACTICE** The radius and height of a cylindrical can are doubled. How does the surface area of the new cylindrical can compare with the surface area of the original cylindrical can? **TAKS Obj. 8**
- (F) The new surface area is two times the original surface area.  
 (G) The new surface area is four times the original surface area.  
 (H) The new surface area is six times the original surface area.  
 (J) The new surface area is eight times the original surface area.

