Simplify each ratio to lowest terms. Improper fractions are not changed to mixed numbers.

- **1.** 24:27
- A. 4:3
- B. 8:9
- C. 9:8
- D. 3:4
- **2.** 150:25
- A. 4:1
- B. 1:4
- C. 1:6
- D. 6:1
- 3.  $\frac{16}{24}$
- A.  $\frac{2}{3}$
- B.  $\frac{3}{2}$
- c.  $\frac{4}{3}$
- D.  $\frac{3}{4}$
- 4.  $\frac{28}{14}$
- A.  $\frac{2}{1}$
- B.  $\frac{7}{4}$
- c.  $\frac{4}{7}$
- D.  $\frac{1}{2}$
- **5.** 5 to 1000
- A. 200 to 1
- B. 1 to 2000
- C. 1 to 200
- D. 2000 to 1

- **6.** George drove 110 miles on 22 gallons of gas. What is the ratio of distance to gallons of gas used?
  - A. 4:1
- B 1:5.
- C. 5:1
- D. 1:4
- 7. Mortar is mixed in a ratio of 1 part cement to 3 parts sand. If a bag of cement weighs 8.5 lbs., how many lbs. of sand should be used?
  - A. 255
- B. 35.5
- C. 25.5
- D. 355
- **8.** If a manually operated winch has a gear ratio of 32:1, that means that 32 turns of the crank will produce 1 turn of the large gear. How many manual terms are necessary to produce 3 turns of the large gear?
  - A.  $10\frac{2}{3}$
- B. 106
- C. 96
- D. 12
- **9.** If every turn of the large gear (problem 8) reels in 2 feet of cable, how many manual turns of the crank are necessary to reel in 12 feet of cable?
  - A. 6
- B. 192
- C. 32
- D. 182
- **10.**A health clinic treated 4,976 patients last year. They gave 622 flu shot during that same year. What is the ratio of flu shots to Patients?
  - A. 8:1
- B. 1:8
- C. 6:1
- D. 1:6

Find the missing term in each proportion.

**11.** 
$$\frac{n}{8} = \frac{9}{12}$$
 A. 72

B. 
$$13\frac{1}{2}$$

D. 
$$10\frac{2}{3}$$

**12.** 
$$\frac{3}{11} = \frac{6}{x}$$
 A.  $5\frac{1}{2}$ 

A. 
$$5\frac{1}{2}$$

D. 
$$16\frac{2}{3}$$

**15.** 
$$3\frac{3}{4}$$
: x = 5:4

$$\frac{1}{16}'' = 2$$
 feet, what is the actual

length of a lot which is 5'' on the drawing?

## Subskill # 27

## Number Theory/Ratio and Proportion I

## **Answer Key**

- 1. B
- 2. D
- 3. A
- 4. A
- 5. C
- 6. C
- 7. C
- 8. C
- 9. B
- 10. B
- 11. C
- 12. D
- 13. B
- 14. C
- 15. B
- 16. A
- 17. A
- 18. D
- 19. D
- 20. B