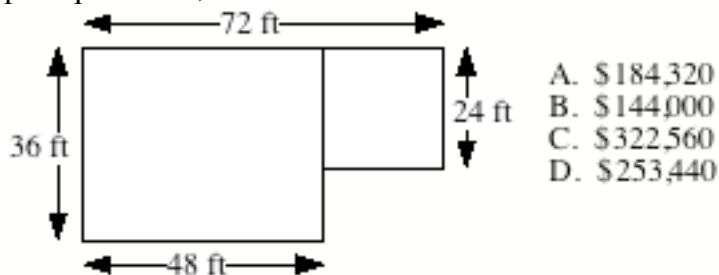**PRACTICE EXERCISES**

1. A circular pizza pan whose diameter is 18 inches costs $15. Assuming that cost depends upon the size (area) of the pan, what would be the cost of a similar pan whose diameter is 9 inches?
A. $30 B. $7.50   C. $6   D. $3.75

2. A carpet-cleaning service estimates that it will cost $40 to remove a circular stain that is 12 inches in diameter. Assuming that the cost of removing a stain depends upon the size (area) of the stain, what would be the cost of removing a similar stain whose diameter is 18 inches?
A. $90 B. $60 C. $26.67   D. $160

3. Aristotle is going to use fabric to cover one of the interior walls of his olive oil warehouse. The wall is 60 feet long and 12 feet tall. The fabric is measured in square yards. How many square yards of fabric will be required to cover the wall.
A. 24   B. 9   C. 72   D. 80

4. Euclid has a contract to trim weeds around the grave markers at the local cemetery. He estimates that for this kind of work, it will take two hours to complete the work on one acre. The cemetery is rectangular, measuring 220 feet by 880 feet. Approximately how long will it take for Euclid to complete the job? (Assume that one acre is roughly equal to 40,000 square feet.)
A. 12.5 hours   B. 9 hours   C. 4.5 hours   D. 2.25 hours

5. What is the area of a circular region whose radius is 8 inches?
A. 64π inches   B. 64π sq. inches   C. 64π cu. inches   D. none of these

6. The diagram below shows the floor plan for a house. If the cost of construction is $80 per square foot, how much will this house cost?
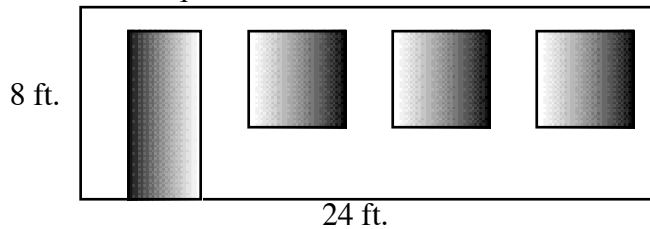

A. $184,320
B. $144,000
C. $322,560
D. $253,440

7. Suppose that it takes three quarts of paint to cover a rectangular floor that is 12 feet wide and 16 feet long. Assuming that the amount of paint required depends upon the size (area) of the floor, how much paint would be required to cover a floor that is 24 feet wide and 32 feet long?
A. 8 quarts   B. 6 quarts   C. 12 quarts   D. 4 quarts

8. Suppose that cleaning up an oil slick from the surface of a lake costs $200,000 if the oil slick is circular in shape with a radius of 2 miles. Assuming that the cost of cleaning

up the oil slick depends upon its size (area), what would be the cost of cleaning up a circular oil slick with a radius of 1/2 mile?

A. $100,000   B. $50,000   C. $25,000   D. $12,500

9. The diagram below shows one exterior wall of a house. The wall has a door that measures 3 ft. by 7 feet, and three windows which each measure 4 ft. by 4 ft. The wall (but not the doors or windows) will be covered with siding material. How much siding material is required?

8 ft.

24 ft.

A. 192 sq. ft.
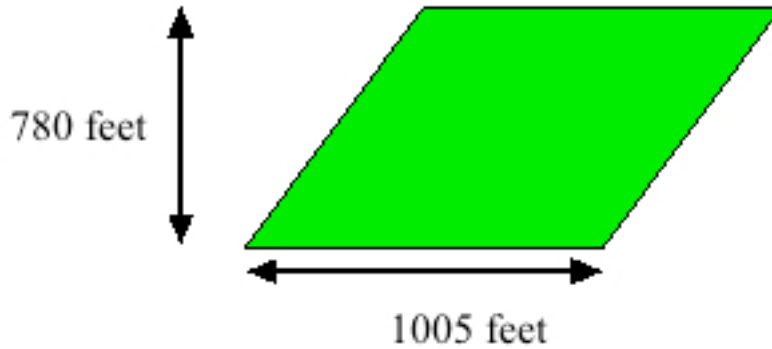B. 155 sq. ft.
C. 123 sq. ft.
D. 261 sq. ft.

10. Referring to the situation in the previous problem: A special window treatment requires a fabric that costs $18.00 per sq. yd. What will be the total cost of window treatment for the three windows shown?

A. $96   B. $288   C. $2592   D. $864

11. A rectangular section of wall measuring 14 feet by 6 feet will be covered with square tiles measuring 4 inches by 4 inches. Approximately how many tiles are needed to cover the section of wall?
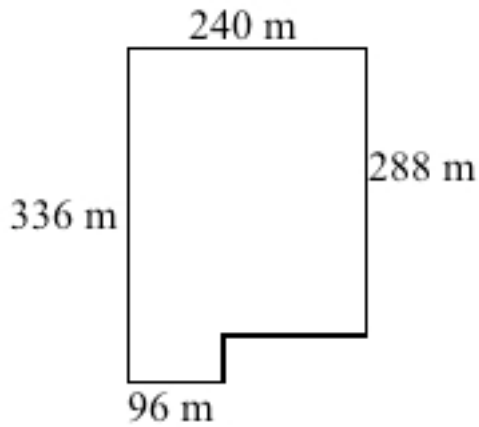
A. 1323   B. 378   C. 1008   D. 756

12. The figure below shows the plan for the a new county park. How many acres will the park occupy? (Use the estimate: 1 acre = 40,000 square feet.)

780 feet

1005 feet

A. 6.53 acres   B. 391950 acres
C. 176.38 acres   D. 19.60 acres

13. The figure below shows the parcel of land on which Aristotle the rancher confines his giraffes. His rule of thumb dictates that each giraffe requires 500 square meters of space. Approximately how many giraffes can the parcel accommodate?

240 m

288 m

336 m

96 m

A. 2   B. 4608   C. 161 D. 147

ANSWERS TO LINKED EXAMPLES
EXAMPLE 3.8.2   B
EXAMPLE 3.8.3   C
EXAMPLE 3.8.7   He was going to charge twice as much as he should have according to his stated rate of $600 per acre.
EXAMPLE 3.8.8   D
EXAMPLE 3.8.9   A
EXAMPLE 3.8.10   B
EXAMPLE 3.8.12 2304 tiles

ANSWERS TO PRACTICE PROBLEMS
1. D   **2.** A   **3.** D   **4.** B   **5.** B   **6.** A
7. C   **8.** D   **9.** C   **10.** A   **11.** D   **12.** D
13. D