

**2004 FFA CAREER DEVELOPMENT EVENT
NURSERY LANDSCAPE PROBLEM SOLVING**

Contestant Number: _____ Name: _____

Chapter Name: _____ Score: _____

Directions: Read each question carefully and choose the best possible answer. If provided with Scantron sheets, bubble in the answer. Otherwise, write the answer in the blank to the left of each number. Each correct answer is worth 10 points.

- _____ 1. A nursery operator has a field 700 feet long and 350 feet wide. How many acres are in this field?
- a. 2.45
 - b. 24.5
 - c. 56.2
 - d. 5.62
- _____ 2. If red maples are planted 12 feet apart in rows that are 12 feet apart, how many trees will it take to plant two acres?
- a. 144
 - b. 288
 - c. 605
 - d. 302
- _____ 3. A greenhouse operator bought \$7850 worth of supplies. The supply company gives a 3% discount for payment within 10 days of shipping and a 2% quantity discount. If the greenhouse operator uses both discounts, what will his total bill be, including 7.5% North Carolina sales tax?
- a. \$4970.80
 - b. \$6360.50
 - c. \$7457.50
 - d. \$8016.81
- _____ 4. If 20 pounds of lime is used per 1000 square feet, how many pounds would be used on $\frac{1}{4}$ acre?
- a. 314
 - b. 510
 - c. 811
 - d. 218
- _____ 5. It takes 1 bale of pine straw to mulch 40 square feet. How many bales are needed to mulch 30 trees with a 4 feet diameter around each tree?
- a. 9.42
 - b. 12.56
 - c. 376
 - d. 15.2

- _____ 6. How many cubic yards of brick chips, 4 inches deep, are needed to mulch a triangular-shaped shrub bed which has a base of 50 feet, sides of 20 feet, and a height of 60 feet?
- 7.33
 - 14.67
 - 4.89
 - 29.33
- _____ 7. It is recommended to sow 2 pounds of Bermuda grass seed per 1000 square feet. The lawn to be seeded is 75 feet x 130 feet. How many pounds of seed are needed?
- 9.75
 - 19.5
 - 195
 - 97.5
- _____ 8. How many DOZEN petunias will you need to plant a flower bed 5 feet x 16 feet if the plants will be spaced 6 inches on center?
- 80
 - 6.67
 - 320
 - 26.67
- _____ 9. You have a patio 24 feet square which you plan to use 18 inch square concrete pavers to construct. The pavers are \$2.25 each. What would the cost of the pavers be, including 7.5% sales tax.
- \$576
 - \$256
 - \$619.20
 - \$61.92
- _____ 10. How many feet of plastic edging will you need to edge four shrub beds 15 feet x 35 feet?
- 100
 - 200
 - 400
 - 300

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ANSWER KEY**

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ANSWER KEY - PROBLEMS**

1. $700 \times 350 = 245,000 \div 43,560 = 5.62$
2. $12 \times 12 = 144$ $2 \times 43560 = 87120 \div 144 = 605$
3. $7850 \times .05 = 392.50$
 $7850 - 392.50 = 7457.50$
 $7457.5 \times .075 = 559.31$
 $7457.50 + 559.31 = \$8016.81$
4. $43560 \times .25 = 10890 \div 1000$ $10.89 \times 20 = 218$
5. $A = \pi r^2$ $A = 3.14 (2)^2$ $12.5659 \text{ ft} / \text{tree}$
 $12.56 \times 30 = 376.8 \div 40 = 9.42$
6. $A = \frac{1}{2} (\text{base})(\text{height})$ $A = \frac{1}{2} (40) (60)$ $A = 1200$
 $1200 \times .33 = 396 \text{ cu ft} \div 27 = 14.67$
7. $75 \times 130 = 9750 \div 1000 = 9.75 \times 2 = 19.5$
8. $5 \times 16 = 80 \text{ sq ft}$ spacing $.5 \times .5 = .25$
 $80 \div .25 = 320 \div 12 = 26.67$
9. $24 \times 24 = 576$ $1.5 \times 1.5 = 2.25$ $576 \div 2.25 = 256 \text{ blocks}$
 $256 \times \$2.25 = \$576 \times .025 = \$43.20$
 $\$576 + \$43.20 = \$619.20$
10. $15 + 35 + 15 + 35 = 100 \times 4 = 400$