

2018 MN FFA Nursery/Landscape Problem Solving

Use the Assessment and Solution section of your scantron to bubble in your answers

Plant Disorders

1. Last year, we reused some old dirty flats and all the bedding plants that were seeded in one area of the greenhouse wilted and died soon after they emerged. What disease did the plants probably die from?

A. Anthracnose B. Damping Off C. Fireblight D. Botrytis

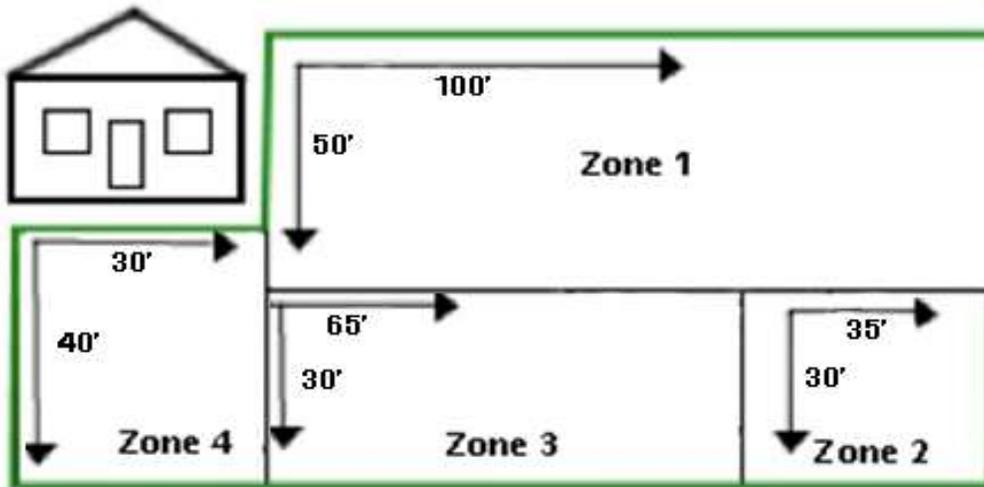
Plant Selection

2. A customer would like to plant a specimen tree in his front yard to serve as a focal point. He has a smaller space, but he would like a tree that had unique characteristics. What tree would you suggest if he lived in St. Paul (Zone 5)?

A. Ginkgo B. Kentucky Coffee Tree C. American Basswood D. Sugar Maple

Lawn care

- 3.



Your customer has Zone 1 in the landscape to be sodded with Kentucky Bluegrass. Your cost/square yard for Kentucky Bluegrass is \$4.50 and you charge \$0.75 per square yard for sod installation. What price will you quote your customer for purchasing and installation of this sod? (Round up to a whole yard with no waste.)

A. \$699.75 B. \$975.25 C. \$2,502.50 D. \$ 2919.00

4. Your customer would also like to aerate zones 2,3,& 4. If you charge \$ 0.20 per square foot to aerate with a five foot drum aerator, what would the cost be to aerate the three zones?

A. \$ 240.00 B. \$ 390.00 C. \$ 840.00 D. \$ 1000.00

Preparing service receipts

5. You have a landscape job that requires you to mulch 30 trees. You will mulch the trees to a depth of 6". The trees require a 3' diameter. How many cubic yards of mulch will be required for the job?

Use $3.14 \times \text{radius}^2$ for the area of a circle Given: $1 \text{ yd}^3 = 27 \text{ ft}^3$ Round up to a whole yard

A. 3 yd³ B. 4 yd³ C. 5 yd³ D. 6 yd³

6. If a job needs 8 cubic yards of pulverized black dirt to fill a raised garden bed, what would the cost be if the black dirt costs \$9.00/yd³ and the hauling charge is \$50.00 per 8 yard load?
- A. \$50.00 B. \$72.00 C. \$122.00 D. \$ 144.00

Fertilizer/ Chemical

7. Determine how much fertilizer you need to apply for one application to maintain your lawn according to the University of Minnesota recommendations of 1 pound of Nitrogen per 1,000 sq. ft.

Given: Lawn area: 88' x 145'
 Fertilizer formulation: 20-0-15

- A. 2.55 lbs B. 25.52 lbs C. 51.04 lbs D. 63.80 lbs
8. The Minnesota legislature passed a statewide law that restricts the application of phosphorus fertilizer to established turf. Why was this law passed?
- A. Most established turf grasses do not need any phosphorus to grow.
 B. Most soils provide adequate phosphorus to maintain turf growth.
 C. Phosphorus toxicity is common in most Minnesota soils.
 D. Phosphorus fertilizer is needed to neutralize low pH lakes.

Nursery plant production

Area in Square Feet ↓	Spacing of Plants (From center of one plant to center of another plant.)							
	4"	6"	8"	10"	12"	15"	18"	24"
25	225 Plants	100	57	36	25	16	11	6
50	450	200	114	72	50	32	22	12
75	675	300	170	108	75	48	33	19
100	900	400	227	143	100	64	44	25 Plants

Use multiples of areas above for areas larger than 100 square feet. For example, a bed 400 square feet in size would require 400 plants at 12" spacing.

9. You are working for a landscape company and today's job requires you to plant annual bedding plants in the 3 beds at the local bank. The three beds measure 25 feet long and 3 feet wide. These bedding plants are to be planted on 8" centers. How many bedding plants should you expect to plant?
- A. 170 B. 227 C. 342 D. 510
10. The bank would like you to plant area between the building and the parking lot with little bluestem planted 24" apart. The area is 40 feet wide and 150 feet long. How many plants will be needed?
- A. 900 B. 1250 C. 1500 D. 1800

2018 MN FFA Nursery/Landscape Problem Solving Key

1. B
2. A
3. D
4. C
5. B
6. C
7. D
8. B
9. D
10. C