

South Dakota FFA Floriculture CDE 2002

Problem 1

Situation:

Mrs. Lincoln has decided to develop a perennial border in remembrance of those that lost their lives in the terrorist attacks of September 11. She wants to include flowers that will bloom in shades of red, white and blue. She also wants to include some other plants that have blue or silvery foliage to add interest and more texture. The bed will face a fairly busy street and will have a slight rise in elevation of one foot from the front to the back of the bed which is approximately rectangular in shape and is about 15' wide and 6' deep. She wants to include plants that will provide a good display of flowers all season long and hopes that the red, white and blue will always be prominent in the bed. Her proposed flower bed will be located here in Brookings, SD and will receive full sun for about 5 hours and then filtered sun for the rest of the day.

Mrs. Lincoln has picked up the attached Extension Extra from the local County Extension office to help her in selecting the plants she will use. She has developed four different lists of plants but cannot decide which one will provide her with the best choice of adapted plant materials that will provide for the best results in her patriotic flower garden.

Use the reference materials to decide which of the four lists presented below would be the best choice of materials for her to use.

Problem 1 - Choice of Answers

A.	<u>Red color</u> Gaillardia Paeonia Sedum Dianthus	<u>White color</u> Dicentra spectabilis Convallaria Iris hybrids Phlox subulata	<u>Blue Color</u> Ajuga Delphinium Phlox paniculata Mertensia
B.	<u>Red color</u> Achillea Dianthus Sedum Dicentra exima	<u>White color</u> Hosta Iberis Convallaria Chrysanthemum	<u>Blue Color</u> Iris hybrids Phlox subulata Viola Mertensia
C.	<u>Red color</u> Phlox subulata Alcea Gaillardia Hemerocalis	<u>White color</u> Delphinium Dictamnus Chrysanthemum Phlox subulata	<u>Blue Color</u> Mertensia Platycodon Salvia Chrysanthemum
D.	<u>Red color</u> Lupine Iris hybrids Liatris Aquilegia	<u>White color</u> Convallaria Aegopodium Dicentra exima Mertensia	<u>Blue Color</u> Clematis Iris siberica Anemone Delphinium

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Problem 2

Situation:

You are a grower in a large greenhouse operation that produces Chrysanthemum plants for Thanksgiving each year. You have been asked to decide on the type of growing media to purchase for the next mum crop. Your manager has asked you to order enough media to plant 2500 - 6.5" azalea pots and 650 - 4" standard pots.

You must calculate how much media you will need to buy and how much it will cost. Then decide which will be the most economical media to purchase.

Choices

- A. 58 bags of Fafard Soilless Mix at a cost of \$548.10
- B. 26 bales of Fafard Mix No. 2 at a cost of \$516.10
- C. 62 bales of Fafard Soilless Mix at a cost of \$585.90
- D. 50 bales of Fafard Mix No. 2 at a cost of \$992.50

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Problem 3

Situation

You are working in a local garden center when you receive an urgent call from a Mrs. Lillian G. Arden. She is very distraught about her houseplant collection. She has just noticed that many of her plants are in distress, exhibiting brown dry edges along many of the leaves and some of the leaves appear to have tiny specks that appear to be moving. She also noticed that some plants have yellow leaves with some tiny webs and that some of these yellowish leaves are falling off. She has brought in a few of the plants for you to examine. After some additional questioning, you learn that the most severely affected plants are near a heating duct.

After considering the information you have gathered, you consult the two Extension Bulletins from the University of MN on caring for houseplants and come to the following diagnosis.

Choices

- A. The plants are in need of additional nitrogen, as evidenced by the yellowish leaves. They are also infested with thrips and should be treated with malathion.
- B. The plants are in a warm dry location by the heat duct which is causing the edges of the leaves to dry out. The plants should be watered more often, placed on a tray of pea gravel, partially filled with water to increase humidity. Also, if possible, move the plants away from the heat duct. The plants should also be treated with insecticidal soap to control the spider mite infestation, as evidenced by the yellowish leaves with webbing.
- C. The plants are infested with spider mites, as evidenced by the yellowish leaves with webbing so should be treated with insecticidal soap. The yellow and dead leaves may be due to a nitrogen deficiency so additional fertilizer should be given.
- D. The plants are apparently infested with aphids, as evidenced by the tiny specks that were seen crawling around on the plants. These could be treated with malathion. Also, the dry edges on the leaves are an indication of low humidity, in connection with the heat duct being near the plants. The plants should be misted at least once per day to increase the humidity.

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Situation

You are a worker in a commercial greenhouse that grows bedding plants. You have been asked to fill the stock tank for the greenhouse fertilizer injector. The stock tank holds 400 gallons of fertilizer solution. The fertilizer injector is a Smith 1:200 proportioner. You are to prepare the appropriate stock solution so that the solution coming out of the end of the hose will contain 250 ppm Nitrogen. You are to use a special fertilizer for growing bedding plants in artificial media that has the following analysis 15-16-17. The fertilizer comes in 25 lb. bags and costs \$18.95 per bag. How much fertilizer will you need to use and how much will it cost?

Two formulas may be helpful to you in calculating your answer.

1. Ounces in 100 gallons of water = $\frac{\text{ppm desired} / 75}{\% \text{ of element in decimal form}}$

2. Pounds to add to tank =
$$\frac{\text{ounces per 100 gallons} \times \text{second number of Injector ratio} \times \text{volume of stock tank}}{100 \times 16}$$

Choices

- A. You will need to buy 45 bags at a cost of \$852.75.
- B. You will need to buy 12 bags at a cost of \$227.40.
- C. You will need 1110 bags at a cost of \$21,034.50.
- D. You will need 167 bags at a cost of \$3,164.65.

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Problem 5

Situation

You work in a local flower shop called **Big D's House of Flowers**. You received a call from a Mr. Eli Reeves ordering flowers for his sister Heather that just had a baby. He wants the "New baby bouquet" which costs \$48.95. He wants it delivered yet the same day to the New Brookings Community hospital, which will mean that there will be a delivery charge of \$3.95 and a rush charge of \$4.00. In addition, the flowers must be delivered after 10:00 AM and before 1:00 PM to coincide with the babies feeding time.

The card should read "Congratulations on the new baby! Love Eli". He is charging the order to his Visa 4522-4600-0097-2321 EXP 9/02 .

Examine the four sample order forms and decide which one is the most completely accurately filled out.

Choices

- A. Sample order form A
- B. Sample order form B
- C. Sample order form C
- D. Sample order form D