



Unit 3: Floral Design

Lesson Four: Pricing Floral Arrangements

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STUDENT LEARNING OBJECTIVES:

After completing these activities students will...

1. Calculate individual unit prices from bulk quantities.
2. Identify the difference in wholesale and retail prices.
3. Solve problems using both ratio and percentage retail markups.
4. Demonstrate understanding of pricing a floral arrangement using an itemized cost sheet.

RESOURCES:

1. [Floriculture CDE Handbook](#)
2. Norah T. Hunter (2013) *The Art of Floral Design* (3rd Edition) Clifton Park, NY: Delmar Cengage Learning.

EQUIPMENT AND SUPPLIES NEEDED:

1. "Pricing Floral Arrangements" PowerPoint
2. A copy of the "Calculating Prices" worksheet for each student
3. A copy of the "Floral Arrangement Itemized List of Costs" worksheet for each student
4. A copy of the "Floral Retail Catalog" for each group of students

PREVIOUS KNOWLEDGE RECOMMENDED FOR THIS LESSON:

- None

THESE ACTIVITIES ARE ALIGNED TO THE FOLLOWING STANDARDS:

AFNR Performance Element

- PS.04. Apply principles of design in plant systems to enhance an environment (e.g., floral, forest, landscape and farm).

FFA Precept

- FFA.PG-J.Mental Growth: Embrace cognitive and intellectual development relative to reasoning, thinking and coping.
- FFA.CS-N.Decision Making: Analyze a situation and execute an appropriate course of action.

Common Career Technical Core

- AG-PL4 Apply principles of design in plant systems to enhance an environment (e.g., floral, forest, landscape and farm).

NASDCTEc

- AGPB01.04 Exercise elements of design common to professionals in plant systems to enhance an environment for a variety of purposes (e.g., floral, forest, landscape, farm).

Common Core- Math Practices

- CCSS.MP1: Make sense of problems and persevere in solving them.
- CCSS.MP2: Reason abstractly and quantitatively.
- CCSS.MP4: Model with mathematics.
- CCSS.MP6: Attend to precision.

AFNR Career Ready Practices

- CRP.04. Communicate clearly, effectively, and with reason. Career-ready individuals communicate thoughts, ideas and action plans with clarity, whether using written, verbal and/or visual methods.
- CRP.06. Demonstrate creativity and innovation. Career-ready individuals regularly think of ideas that solve problems in new and different ways, and they contribute those ideas in a useful and productive manner to improve their organization.

Partnership for 21st Century Skills

- Implement Innovations
- Information Literacy
- Think Creatively
- Work Creatively with Others

LESSON PLAN:

1. **Introduction:** (suggested time 10-15 minutes) Refer to slides 1 and 2 of the "Pricing Floral Arrangements" PowerPoint to present lesson objectives and do the introduction activity.

These are three beautiful arrangements, but I wonder how much they each cost? Before we lock in our answers, let's discuss what factors in the arrangements might affect the final price.

Allow students time to discuss in pairs or as a class how pricing an arrangement works. Factors like flowers should be elaborated on; encourage them to consider seasons, size, blooms per stem, etc. Switch gears and direct them away from flowers to consider containers and other materials as well as time put into an arrangement. Once students have discussed, have them break into teams to decide on a final price to lock in (similar to a game show) and then reveal the answer to see who guessed closest to the correct price.

In today's lesson we will identify what factors go into pricing an arrangement, how material is classified and priced and how markups affect the price, and we will try our hand at pricing an arrangement.

2. **Lecture:** (suggested time 30 minutes) Refer to slides 3-17 of the "Pricing Floral Arrangements" PowerPoint.

As part of the annual floral arrangement practicum during the National FFA Floriculture CDE the students must correctly itemize and calculate the price of a floral arrangement. This lecture and the corresponding application activities are based on this portion of the event. Practicum descriptions, rubrics and itemized list of costs can be found in the [Floriculture CDE Handbook](#).

Each student should have a copy of the "Calculating Prices" worksheet to work on during the lecture. Through simple math, students will be able to take a bulk price (bunch, spool, box, case, etc.) and calculate a single unit price for the material being used. This is important whether working with fresh or hard goods to ensure fair pricing in a floral design business.

Refer to slide 5 of the "Pricing Floral Arrangements" PowerPoint to solve problems 1 and 2 of the "Calculating Prices" worksheet.

Students will understand how bulk hard-good items are broken down into individual unit costs by solving problems in the "Calculating Prices" worksheet. Problems 1 and 2 are demonstrated on slide 5. Allow students to work through problem 3 before moving on.

Refer to slide 7 of the "Pricing Floral Arrangements" PowerPoint to solve problems 4 and 5 of the "Calculating Prices" worksheet.

Students will understand how bulk live-good items are broken down into individual unit costs by solving problems in the "Calculating Prices" worksheet. Problems 4 and 5 are demonstrated on slide 7. Allow students to work through problem 6 before moving on.

Refer to slides 11 and 12 of the "Pricing Floral Arrangements" PowerPoint to solve problem 7 of the "Calculating Prices" worksheet.

After students have distinguished the difference between wholesale and retail prices, they will solve problems using ratio markups. Problem 7 is demonstrated on slides 11 and 12. Allow students to work through problem 8 before moving on.

Refer to slides 14-16 of the "Pricing Floral Arrangements" PowerPoint to solve problem 9 of the "Calculating Prices" worksheet.

While ratio markups are fast and easy, they do not allow the control over profit that you get from using percentage markups. To see this, students will solve problems using percentage markups. Problem 9 is demonstrated on slides 14-16. Allow students to work through problem 10 before moving on.

3. **Activity:** (Suggested time 30 minutes) Refer to slide 18 of the "Pricing Floral Arrangements" PowerPoint to present the "Floral Arrangement Itemized List of Costs" worksheet.

Using the "Floral Arrangement Itemized List of Costs" worksheet, students will create a \$30 arrangement with the material listed in the "Floral Retail Catalog." Please note that the material is already at retail price, so no markups need to be added. Students need to figure out the individual unit prices, which will have to be calculated from the bulk price. Total cost should be within 50 cents of the \$30 price point. Once students have met the price point, have

them include a rough sketch of what the arrangement will look like.

4. **Reflection:** (suggested time 10-15 minutes) Refer to slide 19 of the "Pricing Floral Arrangements" PowerPoint.

Let's see what information we remember from today. As I read each statement, give me a thumbs up if it is true or a thumbs down if it is not. Ready? Let's begin.

1. Flower arrangement prices only account for the flowers used in the design. **Thumbs Down**
2. Hard goods refer to the ribbon, container and tape used in a floral arrangement. **Thumbs Up**
3. You can calculate the individual price of a stem out of a bunch if you know the price of the bunch. **Thumbs Up**
4. The 2:1 markup ratio is used on hard good materials. **Thumbs Up**
5. Percentage markups do not account for things like labor and operating expenses. **Thumbs Down**

5. **Leveling Up:** For student who wish to prepare for the floriculture CDE floral arrangement practicums, practice using the "Itemized List of Costs" found in the [Floriculture CDE Handbook](#). Only 20 minutes are allowed during the practicums to identify, price and arrange a floral arrangement. To efficiently use time, the identification and pricing component should be done within five to seven minutes at the start of the practicum.

With practice students will become faster at completing these components. For practice, encourage students to do the following:

- a) If you have internet access, have students use the plant identification cards on the [National FFA Quizlet](#) page to practice identification.
- b) Have students find images of floral arrangements online and use the internet or a catalog to establish a bulk price, itemize the materials used and solve for the unit prices. In the contest, materials will be listed at retail price so calculating markups is not required.

NAME: _____

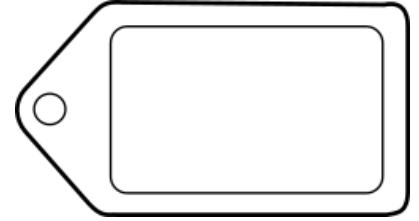
Calculating Prices

DIRECTIONS:

Work through the math questions below to practice calculating costs. Show your work.

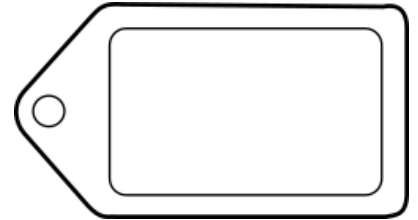
1. How much does it cost to use a yard of ribbon?

#9 satin ribbon
Cost \$4.99 per roll
100 yards per roll



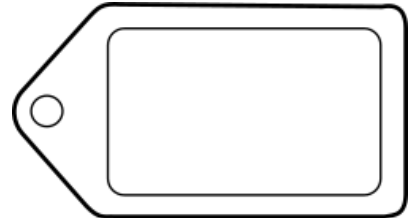
2. How much does a glass vase cost?

4-inch glass vase
Cost \$19.95 per case
24 containers per case



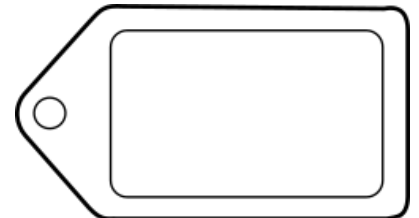
3. How much does it cost to use half a block of floral foam?

1 floral foam block
\$22.50 per block



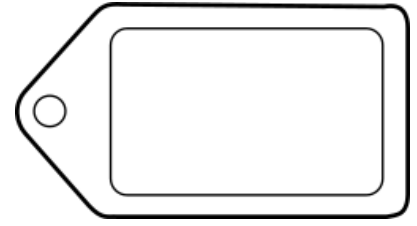
4. How much does it cost to use a stem of leatherleaf fern?

Leatherleaf fern
\$2.95 per bunch
20 stems per bunch



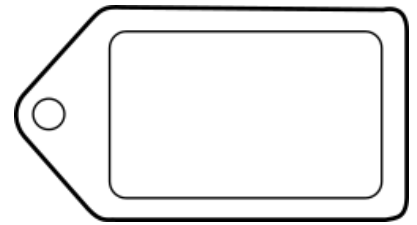
5. How much is a quarter bunch of baby's breath?

Baby's breath
\$3.49 per bunch
Determine by weight



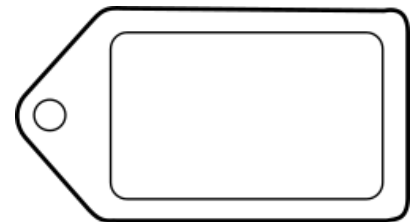
6. How much are 2 rose stems?

Hybrid tea roses
\$69.99 a bunch
25 stems per bunch



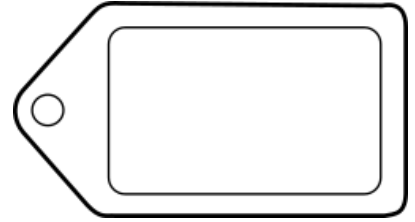
7. What is the retail price on a dozen roses in a bouquet sleeve with a ratio markup?

Sweetheart roses \$16.99 per bunch (25 stems)
Bouquet sleeve \$9.95 per pack (100 sleeves)



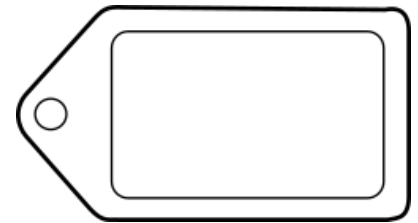
8. **What is the retail price with a ratio markup on a boutonniere with a single rose, a stem of ruscus and a galax leaf? The arrangement uses a foot of floral tape, 6 inches of decorative wire and 2 boutonniere pins.**

Sweetheart roses \$16.99 per bunch (25 stems)
Italian ruscus \$3.75 per bunch (5 stems)
Galax leaves \$5.95 per bunch (15 leaves)
Floral tape \$3.99 per roll (60 feet)
28-gauge wire \$2.97 per spool (150 feet)
Boutonniere pins \$3.99 per box (40 pins)



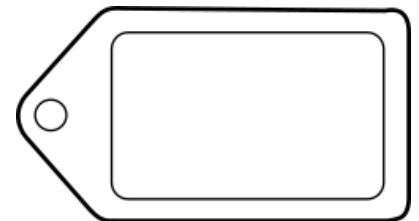
9. **What is the retail price of a glass vase arrangement that uses 12 carnations, 8 leatherleaf stems and half a bunch of baby's breath with a 40 percent markup?**

Carnations \$13.99 per bunch (15 stems)
Leatherleaf fern \$2.95 per bunch (20 stems)
Baby's breath \$3.49 per bunch (determine by weight)
Glass vase \$19.95 per case (24 vases)



10. **What is the retail price of a ceramic container arrangement that uses a third of floral foam block, a quarter bunch of springeri fern, 3 hybrid tea roses, 3 snapdragons and 3 hydrangeas with a 75 percent markup?**

Floral foam block \$22.60 per block
Springeri fern \$3.49 per bunch (determine by weight)
Hybrid tea roses \$69.99 per bunch (25 stems)
Snapdragons \$1.99 per bunch (10 stems)
White hydrangea \$49.95 per bunch (25 stems)
5-inch ceramic container \$34.99 per box (12 containers)



Calculating Prices KEY

1. How much does it cost to use a yard of ribbon?

#9 satin ribbon
Cost \$4.99 per roll
100 yards per roll

Total cost/yards per roll
 $\$4.99/100=\0.0499



2. How much does a glass vase cost?

4-inch glass vase
Cost \$19.95 per case
24 containers per case

Total cost/number of vases
 $\$19.95/24=\0.831



3. How much does it cost to use half a block of floral foam?

Floral foam block
\$22.50 per block

Total cost X 0.5 (or 1/2)
 $\$22.50 \times 0.5=\11.25



4. How much does it cost to use a stem of leatherleaf?

Leatherleaf fern
\$2.95 per bunch
20 stems per bunch

Total cost/stems per bunch
 $\$2.95/20=\0.147



5. How much is a quarter bunch of baby's breath?

Baby's breath
\$3.49 per bunch
Determine by weight

Total cost X 0.25 (or 1/4)
 $\$3.49 \times 0.25=\0.872



6. How much are 2 rose stems?

Hybrid tea roses
\$69.99 a bunch
25 stems per bunch

Total cost/stems per bunch
 $\$69.99/25=\2.80
Single item price X quantity
 $\$2.80 \times 2=\5.60



7. What is the retail price on a dozen roses in a bouquet sleeve with a ratio markup?

Sweetheart roses \$16.99 per bunch (25 stems)
Bouquet sleeve \$9.95 per pack (100 sleeves)

Total cost/amount in total
 $\$16.99/25 = \0.68 per stem
 $\$9.95/100 = \0.10 per sleeve

Individual price x quantity used
 $\$0.68 \times 12 = \8.16 subtotal for a dozen (fresh goods)
 $\$0.10 \times 1 = \0.10 subtotal for a sleeve (hard goods)

3:1 ratio markup on fresh goods subtotal
 $\$8.16 \times 3 = \24.48

2:1 ratio markup on hard goods subtotal
 $\$0.10 \times 2 = \0.20

Subtotals combined for final retail price
 $\$24.48 + \$0.20 = \$24.68$



8. What is the retail price with a ratio markup on a boutonniere with a single rose, a stem of ruscus and a galax leaf? The arrangement uses a foot of floral tape, 6 inches of decorative wire, and 2 boutonniere pins.

Sweetheart roses \$16.99 per bunch (25 stems)
Italian ruscus \$3.75 per bunch (5 stems)
Galax leaves \$5.95 per bunch (15 leaves)
Floral tape \$3.99 per roll (60 feet)
28-gauge wire \$2.97 per spool (150 feet)
Boutonniere pins \$3.99 per box (40 pins)

Total cost/amount in total
 $\$16.99/25 = \0.68 per stem
 $\$3.75/5 = \0.75 per stem
 $\$5.95/15 = \0.40 per leaf
 $\$3.99/60 = \0.07 per foot
 $\$2.97/150 = \0.02 per foot
 $\$3.99/40 = \0.10 per pin

Subtotal fresh and hard goods (don't forget quantity!)
 $\$0.68(1 \text{ rose}) + \$0.75(1 \text{ ruscus}) + \$0.40(1 \text{ galax}) = \1.83 (fresh goods)
 $\$0.07(1' \text{ tape}) + \$0.01(6'' \text{ wire}) + \$0.20(2 \text{ pins}) = \$0.28$ (hard goods)

3:1 ratio markup on fresh goods subtotal
 $\$1.83 \times 3 = \5.49

2:1 ratio markup on hard goods subtotal
 $\$0.28 \times 2 = \0.56

Subtotals combined for final retail price
 $\$5.49 + \$0.56 = \$6.05$



9. **What is the retail price of a glass vase arrangement that uses 12 carnations, 8 leatherleaf stems, and half a bunch of baby's breath with a 40 percent markup?**

Carnations \$13.99 per bunch (15 stems)
Leatherleaf fern \$2.95 per bunch (20 stems)
Baby's breath 3.49 per bunch (determine by weight)
Glass Vase 19.95 per case (24 vases)

(Total cost/amount in total) X quantity used
 $\$13.99/15 = \0.93 per stem $0.93 \times 12 = \$11.16$ for 12
 $\$2.95/20 = \0.15 per stem $0.15 \times 8 = \$1.20$ for 8
 $\$3.49 \times 0.5$ (or $\frac{1}{2}$) = $\$1.75$ for half a bunch
 $\$19.95/24 = \0.83 for a glass vase

Subtotal of all items used
 $\$11.16 + \$1.20 + \$1.75 + \$0.83 = \$14.94$ subtotal

Calculate 40% markup cost from the subtotal
 $14.94 \times 0.40 = \$5.98$

Add the markup to the subtotal for the final retail price.
 $\$5.98 + \$14.94 = \$20.92$



10. **What is the retail price of a ceramic container arrangement that uses a third of floral foam block, a quarter bunch of springeri fern, 3 hybrid tea roses, 3 snapdragons and 3 hydrangeas with a 75 percent markup?**

Floral foam block \$22.60 per block
Springeri fern \$3.49 per bunch (determine by weight)
Hybrid tea roses \$69.99 per bunch (25 stems)
Snapdragons \$1.99 per bunch (10 stems)
White hydrangea \$49.95 per bunch (25 stems)
5-inch ceramic container \$34.99 per box (12 containers)

(Total cost/amount in total) X quantity used
 $\$22.60/3 = \7.50 for $\frac{1}{3}$ foam
 $\$3.49/4 = \0.87 for $\frac{1}{4}$ bunch
 $\$69.99/25 = \2.80 per stem $2.80 \times 3 = \$8.40$ for 3
 $\$1.99/10 = \0.20 per stem $0.20 \times 3 = \$0.60$ for 3
 $\$49.95/25 = \2.00 per stem $2.00 \times 3 = \$6.00$ for 3
 $\$34.99/12 = \2.92 for 1 container

Subtotal of all items used
 $\$7.50 + \$0.87 + \$8.40 + \$0.60 + \$6.00 + \$2.92 = \$26.29$ subtotal

Calculate 75% markup cost from the subtotal
 $\$26.29 \times 0.75 = \19.72

Add the markup to the subtotal for the final retail price.
 $\$19.72 + \$26.29 = \$46.01$



Floral Arrangement Itemized List of Costs

DIRECTONS:

Use the prices given in the "Floral Retail Catalog" to create a \$30.00 arrangement of your choice. The materials listed in the catalog are already at retail price, so *no markups need to be added*. Final arrangement total should be within 50 cents of the \$30.00 price point. A rough sketch of the arrangement should be included at the bottom after the costs have been calculated.

Quantity	Flowers/Foliage (Fresh Goods)	Unit Price	Total
<i>Fresh Goods Total</i>			

Quantity	Materials (Hard Goods)	Unit Price	Total
<i>Hard Goods Total</i>			

Include a sketch:

Arrangement Total