



# Applied Math for Culinary Management

**Applied Math for Culinary Management**, an *individual or team event*, recognizes participants who use Family and Consumer Sciences skills to demonstrate the application of mathematical concepts in the culinary arts industry. Prior to competition, participants must prepare a **file folder**, **oral presentation**, and **visuals**. On site, participants respond to a case study.

## STANDARDS ALIGNMENTS

See STAR Events Resources Page for detailed event alignment information to national educational initiatives and standards.

## CAREER CLUSTER/ CAREER PATHWAY

- Hospitality and Tourism

## Connection to National Standards for Family and Consumer Sciences

Food Production and Services

## EVENT CATEGORIES

**Senior:** grades 10–12

**Occupational:** grades 10–12

See page 84 for more information on event categories.

## PROCEDURES & TIME

### REQUIREMENTS

1. All National Leadership Conference participants will take the Applied Math for Culinary Management Test during the online testing window, May 8-23, 2017, following the online testing specifications. Participants will have 30 minutes to complete the test. Tests will be evaluated and the results will be factored into the team's final score.
2. Each entry will submit a *file folder* with required documents to the event room consultant at the designated participation time.
3. Room consultants and evaluators will have 5 minutes to preview the *file folder* before the presentation begins.
4. Participant(s) will have 5 minutes to set up for the event. Other persons may not assist.
5. Participants(s) will be given 10 minutes to complete the case study in a separate case study room. The completed case study will be given to evaluators prior to the oral presentation.
6. The oral presentation **may be up to 5** minutes in length. A one-minute warning will be given at 4 minutes. Participant(s) will be stopped at 5 minutes.

*(continued next page)*

GENERAL INFORMATION								
Individual or Team Event	Prepare Ahead of Time	Equipment Provided	Electrical Access	Participant Set Up / Prep Time	Room Consultant & Evaluator Review Time	Maximum Oral Presentation Time	Evaluation Interview Time	Total Event Time
Individual or Team	File Folder, Visuals, Oral Presentation	Table	Not provided	5 minutes setup/10 minutes case study	5 minutes prior to presentation	1-minute warning at 4 minutes; stopped at 5 minutes/10 minutes case study	5 minutes	30 minutes

PRESENTATION ELEMENTS ALLOWED									
Audio	Costumes	Easel(s)	File Folder	Flip Chart(s)	Portfolio	Props/Pointers	Skits	Presentation Equipment	Visuals
■		■	■	■		■		■	■

7. If audio or audiovisual recordings are used, they are limited to a 1 minute playing time during the presentation.
  8. Following the presentation, evaluators will have 5 minutes to interview the participant(s) about the oral presentation and the case study.
  9. Evaluators will have up to 5 minutes to use the rubric to score and write comments for each participant. File folders will be returned to participants at the end of scoring.
3. A table and blank note cards for the preparation of the case study response will be provided. Participants must bring all necessary supplies. Participants may bring a calculator, but not a mobile device with a calculator app, for the case study. Wall space is not available.
  4. **Access to an electrical outlet will not be provided.** Participant(s) are encouraged to bring fully charged electronic devices such as laptops, tablets, etc., to use for audiovisual presentation, if desired.

## **ELIGIBILITY & GENERAL INFORMATION**

1. Review “Eligibility and General Rules for All Levels of Competition” on page 87 prior to event planning and preparation.
2. Participation is open to any nationally affiliated FCCLA senior or occupational member who must be or has been enrolled in a culinary arts occupational training program (coursework for high school credit that concentrates in-class learning and/or on-the-job training in preparation for paid *employment*) or a Family and Consumer Sciences course preparing them for a career in culinary arts or hospitality careers (following a nationally recognized curriculum such as ProStart®). Students enrolled in general food and nutrition courses not preparing them for a career in Culinary Arts are not eligible.



## APPLIED MATH FOR CULINARY MANAGEMENT Specifications

### Test

All National Leadership Conference participants will take the Applied Math for Culinary Management Test online prior to competition. Participants will have 30 minutes to complete the 20 question test. Test questions may include multiple choice, true/false, or multi-step *problem solving*. States will determine the method of administering the test at regional/district and state competitions.

### File Folder

Participant(s) will submit one letter-size *file folder* containing three identical sets, with each set stapled separately, of the items listed below to the event room consultant at the designated participation time. The *file folder* must be labeled (either typed or handwritten) in the top left corner with name of event, event category, participant's name, state, and FCCLA national region.

1- 8 ½" x 11" page	<i>Project Identification Page</i>	Use <i>plain paper</i> , with no <i>graphics</i> or decorations; must include participant(s) name, chapter name, school, city, state, FCCLA national region, event name, and title of project.
1- 8 ½" x 11" page	FCCLA Planning Process	Summarize how each step of the <i>Planning Process</i> was used to develop the Applied Math for Culinary Management project.
1 	Evidence of Online Project Summary Submission	Complete the online project summary form located on the STAR Events Resources page of the FCCLA national website and include proof of submission in the <i>portfolio</i> .
1- 8 ½" x 11" page	<i>Works Cited/Bibliography</i>	Use MLA or APA citation style to cite all references. Resources should be <i>reliable</i> and <i>current</i> .

### Case Study

Participants will be given a written case study to evaluate their understanding of the application of mathematical concepts in culinary arts management. The case study will be a common issue in the area of culinary arts management. Each individual or team will complete one Applied Math in Culinary Management Case Study Form which will be turned in to the evaluators prior to the oral presentation. Work will take place within the case study room/station with no spectators. No pre-written material is allowed. Participant(s) will be provided blank Case Study Forms that should be used to respond and relay the developed solution(s). Case study concepts may include, but are not limited to: APQ (as-purchased quantity), EDP (edible-portion quantity), total cost, food cost percent, cost per portion, selling price, beverage costing, yield percents, converting and yielding recipes. After oral presentation, evaluators have the opportunity to ask participants questions about the case study responses.

Knowledge of Subject	Show evidence of knowledge and subject.
Appropriate Solution(s)	Present solution(s) which are feasible and suitable for the situation.

### Oral Presentation

The oral presentation may be up to 5 minutes in length and is delivered to evaluators. The presentation should illustrate the use of mathematics in culinary arts and may include topics such as measurements, conversions, quantity modification, costing of ingredients, and menu pricing.

Organization/ Delivery	Deliver oral presentation in an organized, sequential manner; concisely and thoroughly summarize research.
Knowledge of Subject Matter	Demonstrate thorough knowledge of culinary arts mathematics concepts.
Voice	Speak clearly with appropriate pitch, tempo, and volume.
Body Language/ Clothing Choice	Use appropriate body language including gestures, posture, mannerisms, eye contact, and appropriate handling of <i>visuals</i> or notecards if used. Wear appropriate clothing for the nature of the presentation.
Grammar/Word Usage/ Pronunciation	Use proper grammar, word usage, and pronunciation.
Responses to Evaluators' Questions	Provide clear and concise answers to evaluators' questions regarding the case study and presentation. Questions are asked after the presentation.

## Applied Math for Culinary Management Specifications (continued)

### Visuals/Props

*Visuals/props* may include posters, charts, slides, presentation software, video, etc. and may be used to illustrate or demonstrate *content*. Audio/visual recordings are limited to one minute playing time.

Effectively Illustrate <i>Content</i>	The <i>visuals</i> chosen to present the culinary arts mathematics concepts are clear, concise, and visually appealing.
Use of <i>Visuals</i>	<i>Visuals</i> support, illustrate, or complement presentation.



## STAR Events Point Summary Form

# APPLIED MATH FOR CULINARY MANAGEMENT

Name of Participant \_\_\_\_\_

Chapter \_\_\_\_\_ State \_\_\_\_\_ Team # \_\_\_\_\_ Station # \_\_\_\_\_ Category \_\_\_\_\_

**DIRECTIONS:**

1. Make sure all information at top is correct. If a student named is not participating, cross their name(s) off. If a team does not show, please write "No Show" across the top and return with other forms. Do **NOT** change team or station numbers.
2. Before student presentation, the room consultants must check participants' file folder using the criteria and standards listed below and fill in the boxes.
3. At the conclusion of presentation, verify evaluator scores and fill in information below. Calculate the final score and ask for evaluators' verification. Place this form in front of the completed rubrics and staple all items related to the presentation together.
4. At the end of competition in the room, double check all scores, names, and team numbers to ensure accuracy. Sort results by team order and turn in to the Lead or Assistant Lead Consultant.
5. Please check with the Lead or Assistant Lead Consultant if there are any questions regarding the evaluation process.

ROOM CONSULTANT CHECK			Points
<b>Registration Packet</b> 0 or 3 points	Picked up by adviser or designated adult during scheduled time No <b>0</b> Yes <b>3</b>		
<b>Online Event Orientation Documentation</b> 0 or 2 points	<b>0</b> Official documentation not provided at presentation time or signed by adviser	<b>2</b> Official documentation provided at presentation time and signed by adviser	
<b>Test Scores</b> 0-20 points	Participant 1 _____ Participant 2 _____ Participant 3 _____ <b>Total Team Score</b> _____	Total Team Score _____ divided by # of participants on team _____ <b>= Average Team Score</b> _____ (20 points possible)	
<b>File Folder</b> 0-4 points	<b>0</b> No File Folder presented	<b>1-2-3</b> File Folder presented with incorrect labeling/insufficient materials for evaluators (less than 3 copies of contents)	<b>4</b> File Folder is presented with correct labeling and sufficient evaluator materials • 1 Project ID Page • 1 Planning Process summary • 1 Project Summary Submission Proof • 1 Works Cited/Bibliography
<b>Punctuality</b> 0-1 point	<b>0</b> Participant was late for presentation	<b>1</b> Participant was on time for presentation	

**EVALUATORS' SCORES**

Evaluator 1 \_\_\_\_\_ Initials \_\_\_\_\_  
 Evaluator 2 \_\_\_\_\_ Initials \_\_\_\_\_  
 Evaluator 3 \_\_\_\_\_ Initials \_\_\_\_\_  
 Total Score \_\_\_\_\_  
 \_\_\_\_\_ divided by number of evaluators  
 = **AVERAGE EVALUATOR SCORE**  
*Rounded only to the nearest hundredth (i.e. 79.99 not 80.00)*

**ROOM CONSULTANT TOTAL**

(30 points possible)

**AVERAGE EVALUATOR SCORE**

(70 points possible)    - - . - -

**FINAL SCORE**

(Average Evaluator Score plus Room Consultant Total)    - - . - -

**RATING ACHIEVED** (circle one)    **Gold:** 90-100    **Silver:** 70-89.99    **Bronze:** 1-69.99

**VERIFICATION OF FINAL SCORE AND RATING** (please initial)

Evaluator 1 \_\_\_\_\_ Evaluator 2 \_\_\_\_\_ Evaluator 3 \_\_\_\_\_ Adult Room Consultant \_\_\_\_\_ Event Lead Consultant \_\_\_\_\_



# APPLIED MATH FOR CULINARY MANAGEMENT Rubric

Name of Participant \_\_\_\_\_

Chapter \_\_\_\_\_ State \_\_\_\_\_ Team # \_\_\_\_\_ Station # \_\_\_\_\_ Category \_\_\_\_\_

FILE FOLDER							Points
<b>FCCLA Planning Process Summary Page</b> 0-5 points	<b>0</b> Planning Process summary not provided	<b>1</b> Inadequate steps in the Planning Process are presented	<b>2</b> All Planning Process steps are presented but not summarized	<b>3</b> All Planning Process steps are summarized	<b>4</b> Evidence that the Planning Process was utilized to plan project	<b>5</b> The Planning Process is used to plan the project. Each step is fully explained	
<b>Works Cited/Bibliography</b> 0-3 points	<b>0</b> No resources listed	<b>1</b> Resources are incomplete, not current, or not reliable for project	<b>2</b> Reliable resources but incorrect style ( <i>see style sheet</i> )	<b>3</b> Complete list of current and reliable resources, in MLA or APA style ( <i>see style sheet</i> )			
ORAL PRESENTATION							Points
<b>Organization/Delivery</b> 0-5 points	<b>0</b> Presentation is not done or presented briefly and does not cover components of the project	<b>1</b> Presentation covers some topic elements	<b>2</b> Presentation covers all topic elements but with minimal information	<b>3</b> Presentation gives complete information but does not explain the project well	<b>4</b> Presentation covers information completely but does not flow well	<b>5</b> Presentation covers all relevant information with a seamless and logical delivery	
<b>Knowledge of Subject Matter</b> 0-5 points	<b>0</b> Little or no evidence of knowledge	<b>1</b> Minimal evidence of knowledge	<b>2</b> Some evidence of knowledge	<b>3</b> Knowledge of subject matter is evident but not effectively used in presentation	<b>4</b> Knowledge of subject matter is evident and shared at times in the presentation	<b>5</b> Knowledge of subject matter is evident and incorporated throughout the presentation	
<b>Voice – pitch, tempo, volume</b> 0-3 points	<b>0</b> Voice qualities not used effectively	<b>1</b> Voice quality is adequate	<b>2</b> Voice quality is good, but could improve	<b>3</b> Voice quality is outstanding and pleasing			
<b>Body Language/Clothing Choice</b> 0-3 points	<b>0</b> Uses inappropriate gestures, posture or mannerisms, avoids eye contact/inappropriate clothing	<b>1</b> Gestures, posture, mannerisms and eye contact is inconsistent/clothing is appropriate	<b>2</b> Gestures, posture, mannerisms, eye contact, and clothing are appropriate	<b>3</b> Gestures, posture, mannerisms, eye contact, and clothing enhance presentation			
<b>Grammar/Word Usage/Pronunciation</b> 0-3 points	<b>0</b> Extensive (more than 5) grammatical and pronunciation errors	<b>1</b> Some (3-5) grammatical and pronunciation errors	<b>2</b> Few (1-2) grammatical and pronunciation errors	<b>3</b> Presentation has no grammatical or pronunciation errors			
<b>Responses to Evaluators' Questions</b> 0-3 points	<b>0</b> Did not answer evaluators' questions	<b>1</b> Unable to answer some questions	<b>2</b> Responded adequately to all questions	<b>3</b> Responses to questions were appropriate and given without hesitation			
VISUALS							Points
<b>Effectively Illustrate Content</b> 0-5 points	<b>0</b> Visuals not provided	<b>1-2</b> Visuals are weak in supporting the presentation	<b>3-4</b> Visuals support the presentation but do not complement the content	<b>5</b> Visuals support and complement the presentation			
<b>Use of Visuals during Presentation</b> 0-5 points	<b>0</b> Visuals not used during presentation	<b>1</b> Visuals used to limit amount of speaking time	<b>2</b> Visuals used minimally during presentation	<b>3</b> Visuals incorporated throughout presentation	<b>4</b> Visuals used effectively throughout presentation	<b>5</b> Presentation moves seamlessly between oral presentation and visuals	

# Applied Math for Culinary Management Rubric (continued)

Points

CASE STUDY						
<b>Knowledge of Subject Matter</b> 0-15 points	<b>0</b> No case study response provided	<b>1-2-3</b> Case study is incomplete	<b>4-5-6-7</b> Case study response included a limited amount of current data and knowledge	<b>8-9-10-11</b> Case study response included an adequate amount of current data and knowledge	<b>12-13-14-15</b> Case study response included extensive amount of current data and knowledge	
<b>Appropriate Solutions</b> 0-15 points	<b>0</b> No case study response provided	<b>1-2-3</b> Case study is incomplete	<b>4-5-6-7</b> Solution was partially feasible or appropriate for the situation	<b>8-9-10-11</b> Solution was adequate for the situation	<b>12-13-14-15</b> Solution was feasible and appropriate for the situation, with each step of action apparent and well communicated	

**Evaluator's Comments:**

**TOTAL**  
(70 points possible)

Evaluator # \_\_\_\_\_

Evaluator Initial \_\_\_\_\_

Room Consultant Initial \_\_\_\_\_