Overview
Spreadsheet skills are necessary to convert data to information in business. This event recognizes FBLA members who demonstrate that they have acquired skills for spreadsheet development in business.

This event consists of two parts: an objective test taken at the NLC and a skills production test taken prior to the NLC.

Competencies and Task Lists
http://www.fbla-pbl.org/docs/ct/FBLA/SPREADSHEETAPPLICATIONS.pdf

Website Resources
- Excel Tutorial
  http://people.usd.edu/~bwjames/tut/excel/
- Free Excel file downloads
  http://www.j-walk.com/ss/excel/files/index.htm
- Spreadsheet Basics
  http://www.tutorialsforopenoffice.org/tutorial/Spreadsheet_Basics.html

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SPREADSHEET APPLICATIONS SAMPLE QUESTIONS

1. If a value of 2 is stored in cell C5, and 5 is stored in cell D5, what will be displayed if =C5*D5 is keyed in cell E5?
   a. 7
   b. C5*D5
   c. E5
   d. 10

   Competency: Formulas

2. This is a small black dot in the right corner of the active cell has a number of uses including copying a cell's contents to adjacent cells or creating a series.
   a. Autofilter
   b. Fill handle
   c. Paste options button
   d. Filter list arrow

   Competency: Formulas

3. Assume number of laps is in column A, length is in column B, and width is in column C. Which one of the following formulas would compute the distance traveled around a rectangular field for data in row 5?
   a. =A5*(2*B5+2*C5)
   b. =A5+2*(B5+C5)
   c. =2*(B5+C5)
   d. =(A5+B5+C5)*2

   Competency: Formulas

4. This data tool would be ideal to use in order to find the magic number one cell that contains a total for expenses needs to be to balance a budget.
    a. goal seek
    b. filter
    c. consolidate
    d. trace dependents

    Competency: Formulas

5. To create a named range, simply highlight the range and type the desired name in the:
    a. Name box
    b. Header
    c. Formula bar
    d. Column heading

    Competency: Formulas

6. A(n) _____ takes a value or values, performs an operation, and returns a result to the cell.
    a. cell
    b. argument
    c. operation
    d. function

    Competency: Functions

7. Which one of the following best describes a type of cells in which you can change values at any time?
    a. unprotected
    b. protected
    c. hidden
    d. locked

    Competency: Functions

8. Which one of the following is **not** an acceptable spreadsheet file extension?
    a. ODS
    b. OLE
    c. XLSX
    d. XLS

    Competency: Functions

9. Which one of the following math functions **cannot** be performed using AutoCalculate:
    a. sum
    b. count
    c. multiply
    d. average

    Competency: Functions

10. To select several cells or ranges that are not touching each other, you would:
    a. hold down CTRL + SHIFT
    b. hold down the ALT key
    c. hold down the CTRL key
    d. hold down the SHIFT key

    Competency: Functions

11. The rectangular area that labels the markers or symbols used in a chart.
    a. x-axis
    b. chart area
    c. y-axis
    d. legend

    Competency: Functions

12. Changing the color mode of an inserted image to Washout or otherwise lowering the image transparency results in:
    a. making the image appear lighter
    b. the image being moved into the background
    c. a black and white image
    d. changing the colors to a brighter version

    Competency: Graphics, Charts, and Reports

13. Which one of the following is **not** an option for the shape of the bars in a column chart?
    a. cylinder
    b. cone
    c. pyramid
    d. trapezoid

    Competency: Graphics, Charts, and Reports

14. A chart sheet can contain this, enabling you to display several charts at once within a single sheet.
    a. embedded charts
    b. only one data set
    c. only a single chart
    d. multiple graphics

    Competency: Graphics, Charts, and Reports

15. To move one slice of a pie chart away from the pie creates a(n):
    a. exploded pie chart
    b. exponential pie chart
    c. spontaneous pie chart
    d. perfect pie chart

    Competency: Graphics, Charts, and Reports

16. Which of the following is **not** a general purpose for using spreadsheets?
    a. to interpret data using charts and graphs
    b. to keep track of personal budgets
    c. to present graphical findings with extensive narrative
    d. to analyze financial scenarios

    Competency: Purpose for Spreadsheets

17. Which one of the following is **not** an example of spreadsheet software?
    a. Open Office Calc
    b. Microsoft Excel
    c. Oracle Fusion
    d. Microsoft Works Spreadsheet

    Competency: Purpose for Spreadsheets

18. Which one of these is **not** one of the three parts of an IF function?
    a. a logical test
    b. a what-if analysis
    c. an action to take if the condition is false
    d. an action to take if the condition is true

    Competency: Purpose for Spreadsheets

19. Utilizing Pivot Tables in a spreadsheet is much like utilizing these in a database:
    a. Forms
    b. Data tables
    c. Queries
    d. Macros

    Competency: Pivot Tables and Advanced Tools

20. The procedure to update a PivotTable with changes in the numerical figures is to:
    a. make changes to the PivotTable, and then use the Refresh Data command
    b. make changes to the list first, and then use the Refresh Data command
    c. make changes directly to the PivotTable
    d. use the Refresh Data command

    Competency: Pivot Tables and Advanced Tools

21. The process of finding and correcting errors in a worksheet is:
    a. Debugging
    b. Editing
    c. Checking
    d. Fixing

    Competency: Pivot Tables and Advanced Tools

22. To put a stored macro into action:
  a. open the macro
  b. print the macro
  c. insert the macro
  d. run the macro

  Competency: Macros and Templates

23. Typically, new templates should be saved:
  a. as HTML documents
  b. to a CD-ROM for distribution
  c. to the program's templates folder
  d. to an external storage device, such as a USB drive

  Competency: Macros and Templates

24. What must a data range have before subtotals can be inserted?
  a. enough records to show multiple subtotals
  b. sorted data
  c. formatted cells with banded rows
  d. grand totals

  Competency: Filters and Extraction of Data

25. Which would be a logical secondary sort field for an address list if the primary sort field is Last Name?
  a. State
  b. First Name
  c. Zip code
  d. Age

  Competency: Filters and Extraction of Data

26. If Bruce specifies Jan? as the search criteria, it will locate all of the following records **except**:
  a. Jane
  b. Jamie
  c. Jany
  d. Jani

  Competency: Filters and Extraction of Data

27. You can easily add formatting to a spreadsheet table by using:
  a. Print areas
  b. Calculated columns
  c. Table styles
  d. Print titles

  Competency: Format and Print Options

28. Which one of the following tasks **cannot** be completed in the Print Preview page setup/format page dialog boxes?
    a. add footer/header
    b. change paper size
    c. insert comments/notes
    d. set to print gridlines

    Competency: Format and Print Options

29. This feature causes adjacent rows to have different formatting so that each record in the table is distinguished from surrounding rows.
    a. row banding
    b. search validation
    c. centering and merging
    d. filtering

    Competency: Format and Print Options

30. The operation of making a cell turn red or bold automatically if it exceeds a certain value is called:
    a. integration
    b. absolute formatting
    c. exponentiation
    d. conditional formatting

    Competency: Format and Print Options

SPREADSHEET APPLICATIONS PRODUCTION TEST

GENERAL DIRECTIONS

- Read carefully and follow all steps in the following production jobs.

- The jobs must be completed *in order* to function properly.

- Before printing, resize columns so that all data shows on the printouts.

- When printing, make any necessary adjustments to column size, orientation, margins, and chart/object size to make the documents *fit on one page.*

- Print with a header or footer that contains the job number, your name, school, and state.

Read instructions on the next page before entering data:

	A	B	C	D	E	F	G	H	I
1	5K Road Runners Race Tracking--2011								
2									
3	Runner's First Name	Runner's Last Name	Gender	Race Class	Race 1	Place	Race 2	Place	Average Pace
4	Sierra	Murphy	F		34:02.0		33:30.0		
5	Bethany	Williams	F		32:50.0		32:00.0		
6	Alexis	Rogers	F		31:38.0		30:30.0		
7	Emily	Spencer	F		30:26.0		29:00.0		
8	Angela	Jones	F		29:14.0		27:30.0		
9	Cassey	Parker	F		28:02.0		26:00.0		
10	Tonia	Jones	F		26:50.0		24:30.0		
11	Eliza	Young	F		25:38.0		23:00.0		
12	Lisa	Brown	F		24:26.0		21:30.0		
13	Becky	Long	F		23:14.0	3	20:00.0	3	
14	Karen	Cook	F		22:00.0	2	19:50.0	2	
15	Amy	Mann	F		21:50.0	1	19:45.0	1	
16	Dawn	King	M		16:50.0	1	16:20.0	1	
17	Richard	Nelson	M		17:00.0	2	16:40.0	2	
18	Bruce	Koots	M		17:10.0	3	17:00.0	3	
19	Wayne	North	M		17:20.0		17:20.0		
20	Tony	West	M		17:30.0		17:40.0		
21	Kevin	Carter	M		17:40.0		18:00.0		
22	Timothy	Evans	M		17:50.0		18:20.0		
23	David	Hull	M		18:00.0		18:40.0		
24	Kobe	Brown	M		18:10.0		19:00.0		
25	Carson	Cox	M		18:20.0		19:20.0		
26	James	Dalton	M		18:30.0		19:00.0		
27	Dan	Ells	M		18:40.0		19:05.0		

JOB 1: Spreadsheet with Formulas and Filters

1. Format Race time (Race 1 and Race 2) columns for custom time number format for MM:SS.0 <u>before entering number data</u>. Average Pace also should be formatted in this style. Enter the data above into a spreadsheet. Save your workbook as Race Report. Name the sheet 2011 Races.

2. The first line should be a title line, merged and centered above the columns, bold, and with a 16 point Arial font. The column headings should be bold, centered, 12 point Arial font. Column headings that are larger than the column width should be formatted with word wrap.

3. Convert the data range to a table, if necessary, and format utilizing banded rows with a header row.

4. In the Average Pace column, create a formula for the entire column that adds the two races together and divides by 6.2, which is the average mile pace for the race.

5. In the Race Class column, create an IF function that evaluates the Average Pace. Before doing this, enter the label *Gold Class Rank* (in bold/italics) in A29 and the gold class time value in B29, which is 06:00.0 (format using the special time format indicated earlier). Utilizing that cell as an absolute reference, create the IF function to evaluate Average Pace compared to the Gold Class Rank time. If pace is less than rank time, it should enter GOLD in the cell; if more than the time, it should enter SILVER in the cell.

6. Sort the sheet in ascending order by the runner's last name.

Print Job 1-A: Landscape orientation, center spreadsheet vertically and horizontally on the page

7. Filter the data for female runners only.

Print Job 1-B: "Female runners" only spreadsheet

Print Job 1-C: Landscape with formulas visible; before printing, size out the columns with formulas so the formula is completely visible and hides the columns for gender, Race 1, place, Race 2, and place. Unhide/resize after printing.

JOB 2: Line Chart

1. Before continuing, remove the data filter so all records are visible and no columns are hiding.

2. Filter the data for male runners who are silver class runners only.

3. Create a line chart with markers using the last names and the data from Race 1 and Race 2 only. The legend (series) entries should be Race 1 and Race 2 and the category axis labels should be the runners' names.

4. Format the chart to include a gradient background, series X-axis labeled *Times*, and the title **Silver Runners**. The legend should be visible.

5. Move the chart to its own sheet named Silver Runners. Print the chart on a full page.

Print Job 2: Line chart on a full page

JOB 3: Advanced Function and Pie Chart

1. Return to the 2011 Races sheet. Remove all filters.

2. In cell A31, enter the label Male Gold; in cell A32, enter the label Female Gold.

3. In cell B31, enter a COUNTIFS or SUMPRODUCT formula. It should tabulate an answer only if Race Class is Gold AND Gender is male.

4. In cell B32, repeat this process for Gold class female runners.

5. Change the top female runner's time (Amy Mann) for Race 1 to 19:00.0 and Race 2 to 18:00.0.

6. Using the male/female gold tabulations, create a 3-D exploded pie chart. Do **not** include a legend. Instead, include percentage and labels on the pie. Change the female pie piece to a shade of pink.

7. Add the chart title **Gold Class Rank Athletes**.

8. Position the chart adjacent to the chart data in cells D29-I42.

9. Set Print Area to A29:I42.

Print Job 3-A: Selected data with chart, printed centered on page
Print Job 3-B: Show formulas; adjust columns; entire formula must be visible in column B

JOB 4: Subtotals

1. Convert the data table to a range, if necessary.

2. Sort the data by Gender.

3. Initiate the Subtotals command.

4. At changes in Gender, include Subtotal rows that count and provide subtotals for each gender. Be sure it is set to display summary below the data range.

5. Set print range to exclude everything after row 31 and print.

Print Job 4: Subtotals in landscape format

JOB 5: Pivot Table/Data Pilot

1. Select the table range and remove/delete all subtotals.

2. Create a Pivot Table with destination in a new worksheet. Set row labels to Race Class and values/data field to Gender. The results should count and return values for the number of each gender in each race class.

3. In cell A1 or in the header, type in Pivot Table for Gender Class.

4. Rename the sheet Pivot1.

5. Return to the data and create a second Pivot Table with destination in a new worksheet. Set row labels to Gender and values/data field to Average Pace. The results should average and return values for the pace average within gender.

6. In cell A1 or in the header, type in Gender Comparison of Mile Pace.

7. Rename the sheet Pivot2.

8. Clear existing print range. Group the sheets or create a print range that includes both sets of results. Set to portrait orientation.

Print Job 5-A: Print properties set to print two pages per sheet
Print Job 5-B: One sheet printed with both sets of results.

Parliamentary Procedure Answer Key

1)	A	11)	D	21)	A
2)	C	12)	D	22)	A
3)	C	13)	D	23)	D
4)	D	14)	B	24)	A
5)	D	15)	C	25)	C
6)	B	16)	D	26)	B
7)	C	17)	A	27)	C
8)	C	18)	A	28)	C
9)	A	19)	A	29)	D
10)	C	20)	B	30)	D

Personal Finance Answer Key

1)	C	11)	C	21)	C
2)	D	12)	C	22)	A
3)	B	13)	B	23)	B
4)	A	14)	B	24)	B
5)	B	15)	B	25)	C
6)	D	16)	D	26)	A
7)	A	17)	C	27)	D
8)	C	18)	D	28)	A
9)	A	19)	A	29)	C
10)	D	20)	C	30)	D

Sports and Entertainment Management Answer Key

1)	A	11)	C	21)	C
2)	A	12)	A	22)	B
3)	B	13)	D	23)	D
4)	B	14)	D	24)	A
5)	A	15)	A	25)	C
6)	A	16)	D	26)	A
7)	A	17)	A	27)	B
8)	A	18)	A	28)	B
9)	C	19)	B	29)	A
10)	B	20)	D	30)	C

Spreadsheet Applications Answer Key

1)	D	11)	D	21)	A
2)	B	12)	A	22)	D
3)	A	13)	D	23)	C
4)	A	14)	A	24)	B
5)	A	15)	A	25)	B
6)	D	16)	C	26)	B
7)	A	17)	C	27)	C
8)	B	18)	B	28)	C
9)	A	19)	C	29)	A
10)	C	20)	B	30)	D

SPREADSHEET APPLICATIONS PRODUCTION ANSWER KEY

JOB 1-A: Spreadsheet with Formulas and Filters (30 Points)

Landscape orientation, center spreadsheet vertically and horizontally

5K Road Runners Race Tracking--2011

Runner's First Name	Runner's Last Name	Gender	Race Class	Race 1	Place	Race 2	Place	Average Pace
Lisa	Brown	F	SILVER	24:26.0		21:30.0		07:24.5
Karen	Cook	F	SILVER	22:00.0	2	19:50.0	2	06:44.8
Tonia	Jones	F	SILVER	26:50.0		24:30.0		08:16.8
Angela	Jones	F	SILVER	29:14.0		27:30.0		09:09.0
Becky	Long	F	SILVER	23:14.0	3	20:00.0	3	06:58.4
Sierra	Murphy	F	SILVER	34:02.0		33:30.0		10:53.5
Cassey	Parker	F	SILVER	28:02.0		26:00.0		08:42.9
Alexis	Rogers	F	SILVER	31:38.0		30:30.0		10:01.3
Amy	Rogers	F	SILVER	21:50.0	1	19:45.0	1	06:42.4
Emily	Spencer	F	SILVER	30:26.0		29:00.0		09:35.2
Bethany	Williams	F	SILVER	32:50.0		32:00.0		10:27.4
Eliza	Young	F	SILVER	25:38.0		23:00.0		07:50.6

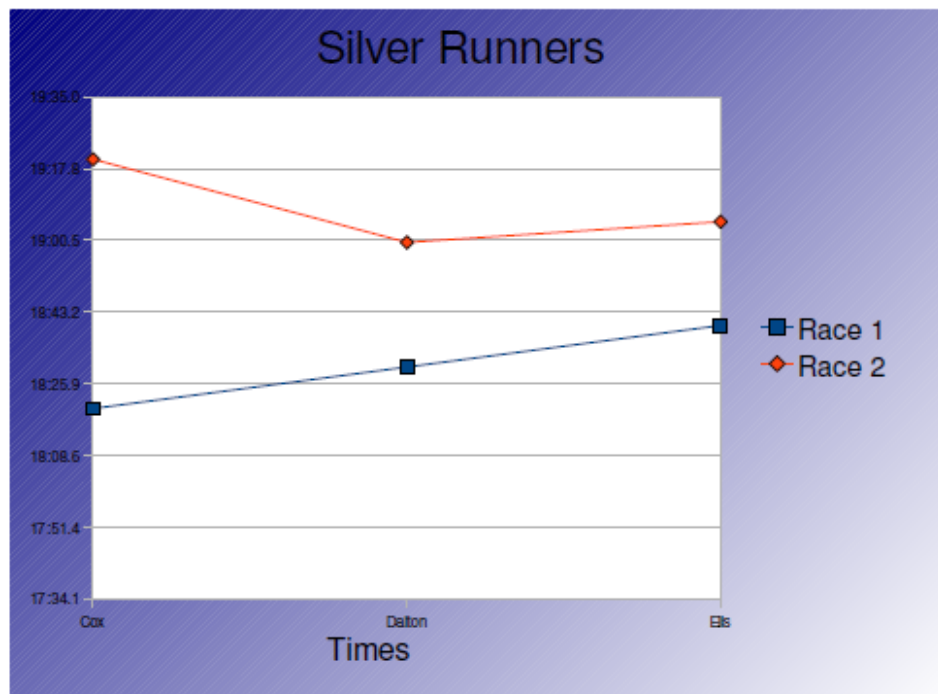*Gold Class Rank*   06:00.0

JOB 1-B: Spreadsheet with Female Runners Only

5K Road Runners Race Tracking--2011

Runner's First Name	Runner's Last Name	Race Class	Average Pace
Lisa	Brown	=IF(I5<B29;"GOLD";"SILVER")	=(E5+G5)/6.2
Karen	Cook	=IF(I7<B29;"GOLD";"SILVER")	=(E7+G7)/6.2
Tonia	Jones	=IF(I13<B29;"GOLD";"SILVER")	=(E13+G13)/6.2
Angela	Jones	=IF(I14<B29;"GOLD";"SILVER")	=(E14+G14)/6.2
Becky	Long	=IF(I17<B29;"GOLD";"SILVER")	=(E17+G17)/6.2
Sierra	Murphy	=IF(I18<B29;"GOLD";"SILVER")	=(E18+G18)/6.2
Cassey	Parker	=IF(I21<B29;"GOLD";"SILVER")	=(E21+G21)/6.2
Alexis	Rogers	=IF(I22<B29;"GOLD";"SILVER")	=(E22+G22)/6.2
Amy	Rogers	=IF(I23<B29;"GOLD";"SILVER")	=(E23+G23)/6.2
Emily	Spencer	=IF(I24<B29;"GOLD";"SILVER")	=(E24+G24)/6.2
Bethany	Williams	=IF(I26<B29;"GOLD";"SILVER")	=(E26+G26)/6.2
Eliza	Young	=IF(I27<B29;"GOLD";"SILVER")	=(E27+G27)/6.2

Gold Class Rank   06:00.0

JOB 2: Line Chart (15 Points)

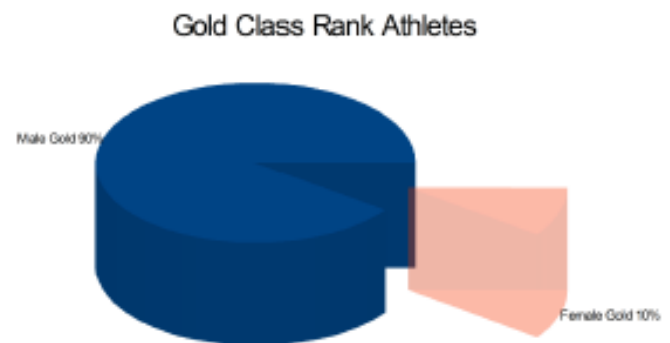**JOB 3-A: Advanced Function and Pie Chart (15 Points)**

Selected data with chart, printed centered on page

Gold Class Rank	06:00.0
Male Gold	9
Female Gold	1

JOB 3-B: Show formulas; adjust columns, entire formula must be visible in column B

Gold Class Rank   06:00.0

Male Gold   =SUMPRODUCT(D4:D27="GOLD";C4:C27="M")
Female Gold   =SUMPRODUCT(D4:D27="GOLD";C4:C27="F")

Gold Class Rank Athletes

JOB 4: Subtotals (15 Points)

5K Road Runners Race Tracking--2011

Runner's First Name	Runner's Last Name	Gender	Race Class	Race 1	Place	Race 2	Place	Average Pace
Tonia	Jones	F	SILVER	26:50.0		24:30.0		08:16.8
Sierra	Murphy	F	SILVER	34:02.0		33:30.0		10:53.5
Cassey	Parker	F	SILVER	28:02.0		26:00.0		08:42.9
Angela	Jones	F	SILVER	29:14.0		27:30.0		09:09.0
Becky	Long	F	SILVER	23:14.0	3	20:00.0	3	06:58.4
Alexis	Rogers	F	SILVER	31:38.0		30:30.0		10:01.3
Bethany	Williams	F	SILVER	32:50.0		32:00.0		10:27.4
Eliza	Young	F	SILVER	25:38.0		23:00.0		07:50.6
Amy	Rogers	F	GOLD	19:00.0	1	18:00.0	1	05:58.1
Lisa	Brown	F	SILVER	24:26.0		21:30.0		07:24.5
Karen	Cook	F	SILVER	22:00.0	2	19:50.0	2	06:44.8
Emily	Spencer	F	SILVER	30:26.0		29:00.0		09:35.2
			12					
David	Hull	M	GOLD	18:00.0		18:40.0		05:54.8
Carson	Cox	M	SILVER	18:20.0		19:20.0		06:04.5
James	Dalton	M	SILVER	18:30.0		19:00.0		06:02.9
Kobe	Brown	M	GOLD	18:10.0		19:00.0		05:59.7
Tony	West	M	GOLD	17:30.0		17:40.0		05:40.3
Kevin	Carter	M	GOLD	17:40.0		18:00.0		05:45.2
Timothy	Evans	M	GOLD	17:50.0		18:20.0		05:50.0
Bruce	Koots	M	GOLD	17:10.0	3	17:00.0	3	05:30.6
Dawn	King	M	GOLD	16:50.0	1	16:20.0	1	05:21.0
Wayne	North	M	GOLD	17:20.0		17:20.0		05:35.5
Richard	Nelson	M	GOLD	17:00.0	2	16:40.0	2	05:25.8
Dan	Ells	M	SILVER	18:40.0		19:05.0		06:05.3
		12						
		24						

JOB 5: Pivot Table/Data Pilot (25 Points)

Filter

Sender	
F	08:30.2
M	05:45.3
Total Result	07:08.3