Ideas with IMPACT

idea packet

Financial Algebra:
Just a Few Keystrokes Away

8/8/2018

Financial Literacy

Just a Few Keystrokes Away

Financial Literacy; Just a Few Keystrokes Away
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Goals & Objectives

SP.PK12.US.1.4b

Apply skills and strategies in mathematical concepts and processes and/or computational fluency, such as financial literacy skills, algebraic problem solving, estimation skills, measurement and geometry skills, and comprehension of graphs, tables, and charts.

CTE-FIN.68.BANK.02.03

Explain the importance of selling financial services by all financial institutions.

CTE-FIN.68.BUSFIN.04.01

Identify important financial data components found in the financial section of a daily newspaper.

SS.912.FL.5.7

Describe how financial markets adjust to new financial news and that prices in those markets reflect what is known about those financial assets.

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Discretionary Expenses – Using the Statistics Features

Anthony wants to make a discretionary purchase of a basic laptop computer. He checks the prices of a particular make and model listed by seven different vendors on a shopping comparison website. He found these prices: $850, $798, $2,400, $790, $836, $700, $780. Using the Ti84Ce calculate the mean, median, mode, and standard deviation of the laptop prices. He computes the mean as $1,022. This number doesn't seem to be a good representation of the data. How can he find a better representation?

Banking Services – Standard Deviation

Find the standard deviation for the following data set by filling in the columns in the table and using the formula. Round to the nearest hundredth.
11, 13, 15, 28, 30

Number	$(x_i - \bar{x})$	$(x_i - \bar{x})^2$
11		
13		
15		
28		
30		

Banking Services – Compound Interest

Nancy receives two offers in the mail from other banks. One is an account that pays 1.38% compounded daily. The other account pays 1.9% compounded quarterly. Would either of these accounts provide Nancy with a better return than her current account? If so, which account?

6

c
Student Loans – Deferred Interest

As an incoming college freshman, Ariana received a 10-year, $9,100 Federal Direct Unsubsidized Loan with an interest rate of 4.29%. She knows that she can begin making loan payments 6 months after graduation, but interest will accrue from the moment the funds are credited to her account. How much interest will accrue while she is still in school and over the 6-month grace period for this freshman-year loan?

Employment – Benefits

Marina works at Washington Performing Arts Center. Her employer offers her a pension. Marina's employer uses a formula to calculate the pension.
A retiring employee will receive 1.5% of their average salary for the last five years of employment for every year worked. Marina is planning on retiring at the end of this year after 25 years of employment. Marina would receive this amount each year until her death. Her salaries for the last five years are $88,900, $92,200, $96,000, $98,000, and $102,000. Calculate Marina's pension.

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Employment – Modeling Tax Schedules

Model the schedule shown in tax schedule notation, interval notation, and compound inequality notation.

Schedule Y-1–If your filing status is **Married filing jointly or Qualifying widow(er)**

If your taxable income is:		The tax is:	of the amount over—
Over—	But not over—		
$0	$18,450	.... 10%	$0
18,450	74,900	$1,845.00 + 15%	18,450
74,900	151,200	10,312.50 + 25%	74,900
151,200	230,450	29,387.50 + 28%	151,200
230,450	411,500	51,577.50 + 33%	230,450
411,500	464,850	111,324.00 + 35%	411,500
464,850	---------	129,996.00 + 39.6%	464,850

Write the tax schedule notation, interval notation, and compound inequality notation that would apply to an income of $172,876.99.

Finding a Place to Live

Bethany's monthly gross income is $3,840. She pays 24% of her monthly gross earnings in federal and state taxes and 15% for her student loan. Bethany uses 15% of her monthly gross income to pay toward her credit card balance. She wants to rent an apartment that will cost $1,800 per month. Will she be able to make the payments without changing the amounts she pays toward her student loans and credit card balances?

Business Ownership

Kyle invests $20,000 in a partnership that has five other partners. The total investment of the partners is $160,000. What percent of the business is owned by the five other partners?

Social Security Benefits

Fran requests her annual Social Security statement from the Social Security Administration each year. She wants to check how many Social Security credits she received for 2016. She worked all year and earned $8,102 per month. How many credits did she earn in 2016?

Budgeting – Cell Phone Usage

Jake's cell phone plan includes 4GB of data usage. On the 19th day of his billing period he received a message from his service provider that he has already used 75% of his data allowance for the billing period. At this rate, will Jake use more than 4GB of data for the month?

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Cash Flow and Budgeting

Liam Brown is single, in his mid-twenties, and owns a condo in a big city. He has calculated the following assets and liabilities.

Assets

Current value of condo: $580,000

Current value of car (as listed in Kelley Blue Book): $17,000

Balance in checking account: $980

Combined balance in all savings accounts: $22,500

Current balance in retirement account: $24,800

Current value of computer: $2,900

Current value of collector bass guitar: $6,700

Current value of stocks/bonds: $18,300

Liabilities

Remaining balance owed on home mortgage: $380,000

Remaining balance owed on student loans: $51,000

Combined credit card debt: $1,600

Calculate Liam's net worth. Last year at this time, he calculated his net worth as $205,780. Compare both values. What do the changes mean?

My Dream Job

Directions: Answer the following questions based on your future career of choice. Answers may be typed or hand-written. Turn-in this page with the rest of your budgeting project.

1. After Graduation, I want to be:

2. The duties or common tasks I will have to perform on the job include:

3. Physical requirements are:

4. The mental abilities and attitudes include (consider academic, verbal, science, clerical and mathematical ability:

5. The working conditions I will have to manage include:

6. The education or special training I need to acquire before I can start on the job are:
7. The hours and schedule include:

8. The expected starting wage is (look at high, median, low, local, beginning, experienced, fringe benefits):

9. The outlook for my chosen career:

10. What are the opportunities for promotion?
11. My likes and dislikes about this career include:

12. Where can I find more information about this career?

    Reminder: Print and hand-in with the rest of your budgeting project.

Name:					
	Category Estimates			**Monthly Working Budget Goal**	
	Yearly Income	**Monthly Income**		**INCOME**	
100%	**$ -**	**$ -**		0.00	Paycheck #1
				0.00	Paycheck #2
				0.00	Other
				0.00	INCOME TOTAL:
	Yearly Expenses	**Monthly Expenses**		**EXPENSES**	
18%	**$ -**	**$ -**		**TAXES**	
				0.00	Income Tax
				0.00	Total:
3%	**$ -**	**$ -**		**SAVINGS**	
				0.00	Savings
				0.00	Investments
				0.00	Miscellaneous
				0.00	Total:
5%				**Misc**	
				0.00	Student Loans
				0.00	Credit Cards
				0.00	Child Care
				0.00	
				HOME	

25%	$ -	$ -	0.00	Rent or Mortgage Payment
			0.00	Gas (utility)
			0.00	Electric
			0.00	Garbage
			0.00	Water/Sewer
			0.00	Home Security
			0.00	Cable/Internet/Phone
			0.00	Cell Phone
			0.00	Home Maintenance
			0.00	Home Furnishings
			0.00	Home Electronics
			0.00	Miscellaneous
			0.00	Total:
				TRANSPORTATION
19%	$ -	$ -	0.00	Car Payment
			0.00	Auto Insurance
			0.00	Auto Gas
			0.00	Vehicle Maintenance
			0.00	License/Registration
			0.00	Public Transportation
			0.00	Miscellaneous
			0.00	Total:
				FOOD & GROCERY
12%	$ -	$ -	0.00	Food At Home
			0.00	Food Away From Home
			0.00	Personal Care Items
			0.00	Small Home Care Items
			0.00	Miscellaneous
			0.00	Total:

				HEALTH & PERSONAL CARE	
				0.00	Doctor Fees
				0.00	Dental Fees
				0.00	Prescriptions
6%	$ -	$ -		0.00	Vitamins
				0.00	Hair/Salon Service
				0.00	Gym Membership
				0.00	Life Insurance
				0.00	Gifts
				0.00	Donations
				0.00	Miscellaneous
				0.00	Total:
				CLOTHING	
6%	$ -	$ -		0.00	Clothes
				0.00	Shoes
				0.00	Dry Cleaning/Laundry
				0.00	Total:
				ENTERTAINMENT	
6%	$ -	$ -		0.00	Vacation
				0.00	Event Fees/Tickets
				0.00	Pet Care
				0.00	Miscellaneous
				0.00	Total:
100%	$ -	$ -		0.00	EXPENSE TOTAL:
0%	$ -	$ -		0.00	WHAT'S LEFT:

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Contributors
with IMPACT

THE EDUCATION FUND
FOR EXCELLENCE IN MIAMI-DADE PUBLIC SCHOOLS

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Anne Marie Miller

Robert Russell
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THE EDUCATION FUND

FOR EXCELLENCE IN MIAMI-DADE PUBLIC SCHOOLS

Apply for an
Ideas with IMPACT
Adapter Grant!

All Miami-Dade County public school teachers, media specialists, counselors, or assistant principals may request funds to implement any project idea, teaching strategy, or project from the 2018 Idea EXPO workshops and/or curriculum ideas profiled annually in the ***Ideas with IMPACT*** catalogs from 1990 to the current year, 2018-19. Most catalogs can be viewed on The Education Fund's website at educationfund.org under "Ideas with IMPACT Catalog Publications."

- Open to all K-12 M-DCPS teachers, counselors, media specialists
- Quick and easy reporting requirements
- Grants range from $150 - $400
- Grant recipients recognized at an Awards Reception

To apply, you must contact the teacher who developed the idea before submitting your application. Contact can be made by attending a workshop given by the Disseminator, communicating via email or telephone, by visiting the Disseminator in their classroom, or by having the Disseminator visit your classroom.

Project funds are to be spent within the current school year or an extension may be requested. An expense report with receipts is required by Monday, June 3, 2019.

APPLICATION DEADLINE:
December 13, 2018
Apply online at educationfund.org

For more information, contact:
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audrey@educationfund.org