FINANCIAL LITERACY 20- NAME _____ DATE _____

CALCULATE: What If You Invested That Latte?

Everyone has things they crave. Some people must always have a stick of gum on hand. Others need chapstick. Coffee is a daily ritual for many of us. On their own, all of these are relatively small purchases. However, over the course of a month or a year those expenses will add up to a LOT of money. *What if, instead of spending small amounts on a regular basis, you saved that money and invested it for retirement? How much money would you have in 30 years?*

1)

Item I'm Forgoing	Price
Item:	$3
Calculate cost of this item for a full year. Assume you spend $3 for 15 days a month for all 12 months in year	Cost= Price x 15 x 12 Cost = $3 x 15 days/ month x 12 months = $____/year

2) Calculate Your Investment Growth

Now, let's see how much money you could earn if you invested that money instead of spending it. To do that, we will use Bankrate.com's **Return on Investment Calculator.**

To make our calculations work, we need to make a few assumptions:

Years	30	For consistency, we'll keep the number at 30. However, in Part 3 you will have a chance to see the impact if you invest for a longer period of time.
Rate of Return	8%	This assumes you invest in an S&P 500 Index Fund, which has historically returned at an *average rate* of 7-9% each year.
Initial Investment	0	Since you are starting this today, you will have no money saved yet.
Additional Investment & Frequency	$____/year	Calculate how much money you would invest PER YEAR and enter it in as your **Additional Investment**. Then, select "PER YEAR" for **Frequency**. Cost= Price x 15 x 12 (FROM ABOVE)
Expected Inflation Rate	3%	This assumes costs will go up, so your investment will go up too.
Tax Rate	0%	This assumes you are investing the money in a TFSA
Inflation Adjustment	Check the Box	This will account for the fact that your item will not be sold at its current price for the next 30 yrs. **A latte may cost $3 today but cost $5 in 10 yrs.**
Show Values After Inflation	DO NOT Check the Box	*When the box IS NOT checked, it will show how much money you will have in total IN 30 YEARS.*

Results - Click “View Reports” to see an in-depth summary of the growth of your investments. In the chart below, enter the results for each section **4 MARKS**

After 30 years you could have: (FILL IN TOTAL HERE) $_____		
Invested Capital - What you personally deposited	**Simple Interest - The sum of the yearly 8% return on your investment**	**Compound Interest - Sum of the yearly 8% return on the simple interest you’ve already earned**

A. Looking at the total value of your investment fund after 30 years, what percentage of it came from money that you invested (the actual $$ you saved by forgoing your chosen item)? What percentage came from interest (simple and compound combined)? **3 MARKS**

B. Which of the three sections contributed the largest portion of your investment fund?

C. What conclusions can you draw about the power of interest?

3) Change the Assumptions

So as you can see, investing the money spent on those small daily purchases can help you build a pretty enormous investment fund. However, let’s examine how your investment growth would change if you changed some specific assumptions.

A. Length of Time - 30 years may not be a reasonable amount of time for you to invest that money. Assuming all other assumptions stay the same, how much money would you have after: **3 MARKS**

   a. 5 years

   b. 10 years

   c. Until you turn 65

B. Change the Amount of Annual Investment - Maybe the item you chose isn’t something you buy every day.

Assuming all other assumptions stay the same (reset time period to 30 years, return is 8%,0% tax rate), how much money would you have if you bought your item: **2 MARKS**

a. **Once a week** (amount you are saving from above x 52 weeks)

b. **Once a month** (amount you are saving from above x 12 months)

C. Show Values Before/After Inflation.

KEEP INVESTING $540/MONTH

To get a sense of the effect of inflation over time, look at how the total amount of your investment fund changes when you adjust for inflation versus not. **2 MARKS**

Total $ *when the "Show Values After Inflation" box is checked* ● This shows how much money you will have in 30 years translated into today's dollar value	
Total $ *when the "Show Values After Inflation" box is NOT checked* ● This shows how much money you will have in 30 years	

a. What conclusion can you draw about the value of money over time? Will $1 be more valuable today or in 30 years? **2 MARKS**

77 Reasons Why Investors Avoided the Stock Market...

1926 Joseph Stallin ruled as dictator of the USSR
1927 German economy collapsed
1928 "Roaring 20s" pushed stock market to new highs
1929 "Black Tuesday" stock market crashed
1930 Hawley-Smoot tariff Act
1931 Unemployment rate soared; US banks collapsed
1932 Dow hit depression-era low
1933 Hitler named German Chancellor - Nazi terror began
1934 Depression continued
1935 Labor union strikes
1936 Spanish Civil War
1937 Recession
1938 Hitler Annexed Austria
1939 World War II began
1940 Fall of France
1941 Japanese attacked Pearl Harbor
1942 Price controls initiated - shortage of consumer goods
1943 Detroit race riots
1944 D-Day - allied forces invade Normandy
1945 Post-war recession predicted
1946 Cold War began
1947 "Red Scare" revisited
1948 Berlin blockade
1949 USSR detonated atomic bomb
1950 Korean War began
1951 Excess Income and Profits tax
1952 Steel labor dispute - US seized mills
1953 USSR detonated hydrogen bomb
1954 Stock market reached new highs
1955 President Eisenhower suffered heart attack
1956 Suez Canal crisis
1957 USSR launched Sputnik satellite
1958 Recession
1959 Castro became dictator of Cuba
1960 USSR shot down U-2 spy plane
1961 Berlin Wall built
1962 Cuban missile crisis
1963 President Kennedy Assassination
1964 Gulf of Tonkin resolution
1965 Civil rights demonstrations
1966 Vietnam War escalated
1967 Six-Day War in Middle East
1968 Martin Luther King Jr. Assassination
1969 Money tightened - stock market declined
1970 US invaded Cambodia
1971 Wage-price freeze
1972 Watergate scandal began
1973 Arab oil embargo - oil prices tripled
1974 President Nixon resigned from office
1975 Fall of Saigon
1976 Economy still struggled
1977 Stock market slumped
1978 Interest rates rose
1979 Iran hostage crisis - oil prices skyrocketed
1980 Hunt brothers silver market crisis
1981 Interest rates remained elevated
1982 Worst recession in 40 years
1983 US invaded Grenada
1984 AIDS virus identified
1985 Economic growth slowed
1986 US bombed Libya; Iran-Contra affair broke
1987 "Black Monday" - stock market crashed
1988 US Savings and loan crisis peaked
1989 US invaded Panama
1990 Persian Gulf War
1991 Global recession
1992 ERM U.K. currency crisis
1993 Great Midwest Floods in US
1994 Mexican Peso collapsed
1995 Oklahoma City bombing
1996 Fed Chairman Greenspan warned of "irrational exuberance"
1997 Asian financial crisis
1998 Russian default/LTCM crisis; Whitehouse sex scandal
1999 Y2K fears; Dow reached 11,000 for the first time
2000 Money tightened - Dot-com bubble burst
2001 World Trade Center/Pentagon terrorist attacks
2002 Corporate accounting issues

Meanwhile, the S&P 500 Index had an annual compounded total return of 10.2% (through 12/31/2002). A hypothetical investment of $10,000 made on 1/1/1926 would have been worth $19,451,567 on 12/31/2002.

Year after year people think of reasons why they should not invest in the stock market. And over time, the stock market outperforms virtually all other investment opportunities.

If investors would have invested from Jan 1, 1926 until Dec 31, 2002, a $10,000 investment would have grown to $19,451,567 on the S&P 500 index (stock market in the US.)

Why do people avoid the stock market or investing?

What are they afraid of?
2 MARKS