financialalgebra

5.4 Stocks

Student Activity Packet

UNIT: INTRO TO INVESTING & EXPONENTIAL FUNCTIONS

Name:

IN THIS LESSON, YOU WILL:

- Compare linear and exponential growth patterns
- Apply compound interest formula over successive periods
- Calculate percent growth
- Define a stock and describe how it can make money
- Identify and name trends in the stock market as bullish or bearish
- Assess the risks of investing in stocks
- Calculate returns and return on investment

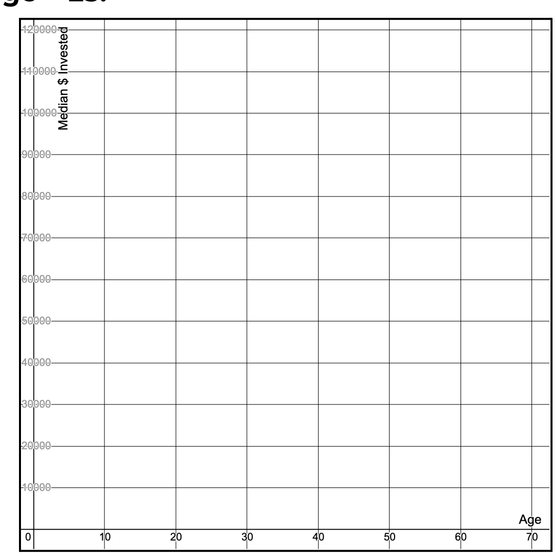
INTRO

QUESTION OF THE DAY: What percent of 18-34 year olds are investing in the stock market?
Write your answer to the question below. Then, compare your answer to the answer and chart on the second slide. Finally, follow your teacher's directions on how to answer the follow-up questions below.

1. **What percent of 18-34 year olds are investing in the stock market?**

2. **Why do you think a higher percentage of those over 35 years old invest in the market compared to those under 35?**

3. **Plot the Median amount saved vs. age on the graph below. Use the lowest value for each group, and for the <35 group, use age = 25.**



4. **Do these values seem more linear or exponential? Sketch a line and an exponential curve to justify your response.**

5. **Since exponential growth has the largest gains at the end, which group of current investors is best able to take advantage of the power of compounding?**

6. **If investment earnings compound exponentially, what are some reasons the median account holdings curve across age groups isn't more of an obvious exponential curve?**

LEARN IT

VIDEO: [How The Stock Exchange Works (For Dummies)]
INFOGRAPHIC: [The Stock Market - Explained]

You've probably heard about the stock market, but what is it and how does it work? Watch this video and read this infographic to learn what it means to buy a stock. Then, answer the questions.

1. **How does a company benefit by having their stock listed on an exchange?**

2. **As an investor, what are the risks involved with buying a company's stock?**

3. **What are the two ways that investors can make money from stocks?**

EDPUZZLE: [Trends in the Stock Market]

As we saw, stocks change prices all the time for a variety of unpredictable reasons. If you're wanting to follow the age-old advice of "Buy low; sell high," then you'll need to pay more attention to the trends in the market. Watch this video to learn more. Then, follow your teacher's directions to answer the questions either within the EdPuzzle itself or on this document.

NOTE: EdPuzzle videos shuffle answer choices and do not always match the order provided in the lesson.

1. **What is the difference between a BULL and a BEAR market?**
   a. A BULL market is when the stock market is rising and the economy is booming, while a BEAR market describes a declining market and a receding economy.
   b. A BULL market is when there is a decline in the stock market and the economy is receding, while a BEAR market describes a rising market and a booming economy.

2. **Which adjective would best describe a BEARish investor attitude?**
   a. Optimistic/Positive

b. Pessimistic/Negative

3. **True or False: It is easy to predict trends in the stock market.**
    a. TRUE
    b. FALSE

INTERACTIVE: Playing the Long Game

This game simulates investing in the stock market over 20 years, with 4 opportunities to buy or sell your investments. Follow the directions and answer the questions. Can YOU beat the market...?

1. **Play the game once. What was your strategy?**

2. **Play the game a second time. Did you alter your strategy? Why or why not?**

3. **How did you respond when the market declined?**

4. **What did you notice about the S&P 500 trends overall as you played?**

5. **Now that you've had the chance, do you think it's easy to 'time the market' to avoid losses? How would that change your investing strategy?**

GRAPH: S&P 500 Total Index Returns 1957 - March 2020

In the previous game, you experienced long-term stock market trends and considered how they impact your investing approach. Now, you'll look at how the market has moved since 1957. The S&P 500 measures how the stock market is doing overall, based on the prices of 500 of the biggest companies.
Analyze the graph and answer the questions to learn more about trends in the stock market over time.

1. **What were the overall returns during the bull market from 1970 to 1973?**

2. **If you invested $100 at the beginning of that market, how much would you have had in 1973?**

3. **Imagine you invested $1000 at the beginning of the bull market in 1988 and got out right before the dot-com bubble burst in 2000 causing a recession. How much would your portfolio have been worth at that time?**

4. **Now, your friend Jane started investing at the same time you did, but didn't get out. How much**

would her portfolio be worth at the end of the following bear market from 2000 to 2003?

5. **After your close call, you decide the stock market is too risky and you keep your money out for good. Jane decides to just leave her money in and see what happens. Who would have more money in 2019 just before the bear market caused by the COVID-19 pandemic? How much more? (Hint: For Jane's total, you will do three separate calculations for the three different periods 2003-2019)**

INFOGRAPHIC: What Are Dividends?

Buying stocks and selling them for a higher price is just one way to make money with your investments. The other way is through dividends. Examine this infographic about dividends and answer the following questions.

1. **What is a dividend payment?**
2. **Do you think dividends are part of a short-term or long-term investment strategy? Explain your answer.**
3. **How can you take advantage of the power of compounding with your dividends?**

MATH CONNECTION - RETURN ON INVESTMENT

ACTIVITY: Return on Investment

We all have a limited amount of money to invest, and we want to make sure that we're investing wisely. For example, is it better to invest in a stock that gains $50 from $200 to $250 or a stock that gains $100 from $1000 to $1100? Return on Investment allows us to compare different investment options no matter how large or small they are individually.

EXIT TICKET

Follow your teacher's instructions to complete the Exit Ticket.

Teachers, you can find exit ticket questions on the Lesson Guide.