Saving Versus Investing
Activity: Interest Rates & The Benefits Of Saving
WORKSHEET

Warm Up Exercise

Before we break out into groups of 3, we are first going to think through a couple exercises about saving and interest rates, which are an added bonus to saving your money.

SCENARIO

A. If someone is working at a job for 40 hours per week, making $15 an hour, how many weeks would they need to save in order to purchase an item that costs $3000? How many months?

B. With the same salary and job requirements as the example above, imagine you must save $50 per week in an emergency savings fund that you cannot spend. How long would you need to work in order to purchase an item that costs $3000? How many months?

C. Imagine in the above example, you must also pay $1500 of monthly expenses, every 4 weeks, beginning with Week 4. How many weeks would you need to save in order to pay your monthly expenses and save $20 per week, but also afford the $3000 item?

D. Calculate the total amount of money you would have earned while working in Question C. What percentage did you save in your emergency funds? What percentage went to monthly expenses? What percentage was spent on the $3,000 item.

Please break into groups of 3 or 4 to work on the next pages of questions. These formulas are incredibly important for these questions we have prepared about saving and interest rates. Remember to check these formulas if you have any issues. After talking with your group, feel free to ask your instructor if you have any questions.

IMPORTANT FORMULAS	
Calculating Simple Interest $$A = P * (1 + (R * T))$$ **Calculating Compound Interest** $$A = P * (1 + R)^T$$	**A:** New Amount **P:** Initial Amount **R:** Annual Interest Rate **T:** Time In Years

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Q1: Kyle invested $2,000 at a 6% simple interest rate. Write the equation that gives the total amount A, in dollars, Kyle will receive when he sells the bond after T years. Then calculate how much money Kyle will receive after 3 years.

Q2: An investor decides to offer a business owner a $20,000 loan. The simple interest rate of the loan is 5% per year. Find the total amount in dollars, the investor will receive when the loan is repaid after 5 years.

Q3: Jonas has a high-yield savings account that earns 3% interest compounded annually. If his initial deposit is $1000, find the value of the deposit after 10 years.

Q5: Using the example above, how much would Jonas's deposit be worth if the account offered simple interest instead of compound interest?

Q6: Jay puts an initial deposit of $400 into a bank account that earns 5 percent interest each year, compounded annually. Find the value of the deposit after 4 years. Then find the difference if the bank only offered simple interest.

Q7: Daniel has $1000 in a checking account and $3000 in a savings account. The checking account earns him 1 percent interest compounded annually. The savings account earns him 6 percent interest compounded annually. Assuming he leaves both these accounts alone, how much will each account be worth after 3 years?

Q8: Kristen opens a bank account with $1,000 that earns 4% interest each year, compounded annually. How much is Kristen's account worth after 50 years? How much is it worth after 100 years if the interest is simple interest?

Q9: Say that you have an investment with compounding interest which doubles in value in 10 years. How long will it take for the investment to double a second time? Is this answer the same if you use simple interest?

Q10: When Paige first invested, she invested $1,000. Next year, the investment was worth $1,300. What was her percentage rate of return?

Q11: If a bank offered you simple interest or compound interest, which would you take?