

SHARES AND DIVIDENDS

Subject

Mathematics

Prepared By

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Grade Level

5

Overview

This lesson plan covers teaching content for;

1. Taxes and rates.
2. Buying and selling of shares and dividends.

Objectives

Students should be able to:

1. Solve for tax
2. Solve for shares and dividends.

Activity Starter/Instruction

1. Tell pupils to imagine that everyone thinks that they need a new school building. Ask students to think about ways that the money can be raised.
2. Give them time to suggest ways to raise money and list them on the board. Ask how much can be raised doing these things?
3. Ask students if they have an idea of how much it costs to build a new building.
4. Tell them the average cost is 16 million. Ask if their list will generate that amount. Tell students there is a way for the new school to be built and that's what you will talk about today.

Guided Practice

Day 3/ Lesson 3: 20Mins

1. **Shares:** A joint stock company divide its capital into parts called shares. The shares purchased by an individual is also called stock.
2. **Shareholders:** Persons who purchase the shares are called shareholders or stockholders.

Teacher Guide

Day 1/ Lesson 1: 15mins

1. Bring in a receipt from something you have recently purchased, perhaps with just one or two items on it.
2. Tell pupils they will be doing math problem and will tell you how much you had to pay for your item(s). Read off the name of the item(s) and its (their) cost and ask them to add up.
3. Tell pupils you didn't pay that amount, you had to pay more than that! Be dramatic and ask questions:
How is that fair?
Why did the store charge you for more than your items cost?
4. Tell pupils that when we buy things at the store, we are charged a sales tax. This is an extra amount that is based on how much we spend at the store.
5. Ask pupils, who gets that extra amount? Tell students that the store collects it, but that the store sends that extra amount to the government, so that the government can

Materials Required

- White Board
- Marker
- Receipt of a purchase

Additional Resources

- <https://www.math-only-math.com/worksheet-on-share-and-dividend.html>
- <https://www.mathstips.com/shares-dividends/>
- <https://www.usa.gov/taxes-lesson-plan>
- <https://www.moneyinstructor.com/ls/msimulation.as>
- <https://betterlesson.com/lesson/543952/sales-tax-lesson-3-in-lesson-progression>
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Additional Notes

Teacher Guide

Day 2/ Lesson 2: 15 Mins

1. Let's Go Shopping!!!
2. Tell pupils they have \$500, they can spend any way they want.

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3. Using ads from newspapers, catalogue or magazines, pick out items you would like to purchase. Estimate as you go not to spend more than \$500. Remember you will have to pay 7.5% sales tax but you will also receive a discount.
4. Teacher creates a worksheet in a table format containing: Item (A), Discount (save 33%, 1/3 off, 10% off, 25% off, ¼ off, save 75%, take 25% off, take \$10 off, save 15%, take 50% off. Listed in the column beneath discount), Discount in decimal form, multiplication sign down the column, original amount (B), equal sign down the next column, dollar amount of discount (C), all in a row.
5. Pupils will list items that they have decided they can purchase without going over budget. Pupils will think about what items they would like to put with what discount.
6. They'll find the discount in decimal form and write in the third column. Multiply the decimal times the
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3. Face **value** (F.V): The original value of a share is called face value or par value or nominal value or printed value of the share.
4. **Market value (M.V)**: The price at which the share is bought or sold in the market is called the market value or cash value of the share.
 $M.V > F.V$
 Then, share is above a par
 $M.V = F.V$
 Then, share is at par
 $M.V < F.V$
 Then, share is below par or is at discount.
5. **Dividend**: The part of the company's annual profit which a shareholder gets for his investment. It is always calculated on the face value of a share.
- Money invested = number of shares \times M.V of one share
 - Annual income = number of shares \times F.V of one share \times Rate of dividend
 - Rate of dividend is a percentage of face value of a share per annum.
 - Dividend yield/return = $\frac{\text{Annual income}}{\text{Investment}} \times 100$
 - Number of shares purchased:
 $= \frac{\text{investment}}{\text{M.V of one share}} = \frac{\text{annual income}}{\text{Income on one share.}}$
6. A man invests \$660 buying shares of \$30 each and selling at 10% premium. The dividend on the share is 12%. Calculate the number of shares he buys and also the dividend he receives annually.
7. F.V of each share = \$30
 Premium = 10%
 M.V of each share = \$ (30 + 10/100 \times 30) = \$33
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provide the things we use every day, like a school building.

Guided Practice

Day 4/ Lesson 4: 15mins

1. Michael buys shares of face value \$ 50 of a company which pays 10 % dividend. At what price did he buy each share from the market if his profit is 16 % on his investment?
 2. Let the market value (M.V.) of each share be x. The dividend is calculated on nominal value.
 3. The dividend on one share:
 $= 10\% \text{ of } \$ 50 = \$ 5.$
 4. Therefore, he earned \$ 5 on an investment of x.
 5. A profit of 16 % on x
 6. $= \frac{16}{100} \times X = \frac{4x}{25}$
 7. Therefore, $\frac{4x}{25} = \$ 5$
 8. $\Rightarrow x = \frac{\$25 \times 5}{4}$
 $\Rightarrow x = \frac{\$125}{4}$
 $\Rightarrow x = \$ 31.25$
 9. Therefore, Michael bought each share at \$ 31.25 from the market.
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original amount, write the product answer in the dollar amount of discount column.	Investment = \$660 Numbers of shares bought = $\$ 660 / \$ 33 = 20$ Dividend received = $\$ (20 \times 30 \times 12/100) = \72 8.The dividend received is \$72	
Summary Select pupils at random to provide answers to problems solved.	Assessment Activity Pupils need to be familiar with tax, rate, shares and dividends.	Assessment Activity Assess if pupils can: 1. Solve tax, rate, shares and dividends problems correctly.