

School

KS4 Maths—Lesson Plan

Learning Objectives

To be able to use multipliers to solve a range of percentage problems

- To recognise the multipliers that represent given percentages
- To use multipliers for compound interest
- To solve problems when the reduced / increased value is known



Assessment for Learning

- Use of MWB for assessment of confidence with multipliers
- Test your understanding questions to be assessed using MWB
- Teacher check of independent work—live marking
- Students green pen assess quickfire qs



The BIG Picture

Students have done basic percentage increase in y10 but no reverse percentages or more complex problems. Upcoming mocks mean use of calculator is real focus

Differentiation

- Percentage challenge questions available and given to students who need more challenge
- Directed questioning
- Plenary answer the most challenging question



Engagement

Use of MWB throughout

Link to income tax and calculations



Key Words

Multiplier, compound, simple, reverse, percentage, income tax, depreciation



Learning Episodes

Starter—students given several percentage calculations to do on MWB to assess how many use multipliers. Directly question several students to show how to use a multiplier.
Quickfire exercise done in books then assessed using green pens

Ask students about simple v compound interest—where would we use compound interest? Why do you need to understand it?
Model working for compound interest on board. Students complete exercise B in books—circulate and live mark work

Introduce reverse percentages—show a question and ask students to try on MWB—feedback verbally then model two methods on the board. explain how to determine if a question require—quickfire reverse or not on MWB. Students model some examples in their books.
Answer the most challenging q on MWB

Ask students to discuss in pairs how income tax is calculated—take feedback from some pairs.
Students given several incomes and asked to calculate tax payable

High School Lesson Plan

Context and Careers

The BIG Picture

Students have done basic percentage increase in y10 but no reverse percentages or more complex problems. Upcoming mocks mean use of calculator is real focus

Learning Objectives

- To be able to use multipliers to solve a range of percentage problems
- To recognise the multipliers that represent given percentages
 - To use multipliers for compound interest
 - To solve problems when the reduced / increased value is known
 - To understand how [income tax works and calculate salaries](#) or show use of [mortgage calculators](#) and savings calculators.



Links to financial sector
[HMRC](#) or [Mortgage Advisors](#)
Job profile for [financial advisor](#)
to give real life applications of percentages—house value, loans, mortgages, income tax, reductions in sales and savings.

Differentiation

- Percentage challenge questions available and given to students who need more challenge
- Directed questioning
- Plenary answer the most challenging question



Engagement

Use of MWB throughout
Link to income tax and calculations

Discussion of real life applications and job roles of people using percentage calculations.



Key Words

Multiplier, compound, simple, reverse, percentage, income tax, depreciation



Assessment for Learning

- Use of MWB for assessment of confidence with multipliers
- Test your understanding questions to be assessed using MWB
- Teacher check of independent work—live marking
- Students green pen assess quickfire qs
- Contextualised exam q



Learning Episodes

Starter—students given several percentage calculations to do on MWB to assess how many use multipliers. Directly question several students to show how to use a multiplier.
Quickfire exercise done in books then assessed using green pens

Ask students about simple v compound interest—where would we use compound interest? Why do you need to understand it?
Model working for compound interest on board. Students complete exercise B in books—circulate and live mark work

Introduce reverse percentages—show a question and ask students to try on MWB—feedback verbally then model two methods on the board. explain how to determine if a question require—quickfire reverse or not on MWB. Students model some examples in their books.
Answer the most challenging q on MWB

Ask students to discuss in pairs how income tax is calculated—take feedback from some pairs.
Show the criteria and explain how tax is calculated.
Students given several incomes and asked to calculate tax payable