

Scheme of Learning: Year 9 Spring Term

Topic Sequence: Reasoning with Numbers

6	7	8
Numbers	Using Percentages	Maths and Money

Topic Overview:

Building on their revision of fractions in the last block, students relate these to fractions and decimals, extending their learning in Year 8. All students will look at 'reverse' percentage problems with higher attainers stretched by looking at repeated percentage change. Both calculator and non-calculator methods are encouraged, with the use of decimal multipliers again key.

Lesson Sequence:

Use the equivalence of fractions, decimals and percentages (R)

Students will review the fraction, decimal and percentage conversions that they know and use these to derive new ones. They will then revise the formal methods of conversion through multiplication and division by 100 and simplifying fractions.

Calculate percentage increase and decrease (R)

Students will review the multiplier method used for percentage increase and decrease.

Express a change as a percentage (R)

Students will revise writing one number as a percentage of another. They will then calculate the percentage increase and decrease.

Solve 'reverse' percentage problems

Students will solve problems where they need to find the original amount when given the final amount and the percentage increase/decrease. They will look at solving problems with and without a calculator.

Recognise and solve percentage problems (non-calculator)

Students will develop their reasoning skills by recognising the type of problem and selecting the correct approach. They will start with simple numbers first advancing to those that require more complex working with division and/or fractions.

Recognise and solve percentage problems (calculator) (R)

Students will now tackle problems with greater arithmetic demand. The focus remains on recognising whether they need to find an increase, a decrease, an original value or to express a quantity as a percentage.

Solve problems with repeated percentage change (H)

Students will explore the effect of repeated percentage change.

Sequence of Lessons:

1	Use the equivalence of fractions, decimals and percentages (R)
2	Calculate percentage increase and decrease (R)
3	Express a change as a percentage (R)
4	Solve 'reverse' percentage problems
5	Recognise and solve percentage problems (non-calculator)
6	Recognise and solve percentage problems (calculator) (R)
7	Solve problems with repeated percentage change (H)

Topic Resources

Knowledge Maps

Assessment:

Knowledge:

End of Topic test

Application of Knowledge:

Termly mixed topic assessment

Supportive Reading:

Sparx Maths: www.sparxmaths.co.uk
Corbettmaths: www.corbettmaths.com
AQA Revision Guide