

Approximate numerical solutions to problems involving rational numbers and percentages...

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Learning intention

- approximate numerical solutions to problems involving rational numbers and percentages, including financial contexts, using appropriate estimation strategies

Teach and model

- using familiar fractions, decimals and percentages to approximate calculations, such as, 0.3 of 180 is about $\frac{1}{3}$ of 180 or 52% is about $\frac{1}{2}$
- choosing appropriate estimation strategies including rounding to the nearest whole number, knowledge of multiples of 2, 5 or 10 and partitioning numbers in contexts such as...
- recognising the effect of rounding on calculations involving fractions or decimals and saying what numbers the answer will be between

Check understanding

- Explain the main idea in approximate numerical solutions to problems involving rational numbers and percentages... using an example.
- Show the idea in a second way: with words, a model, a diagram or symbols.
- Apply the idea to a short unfamiliar situation and justify the result.

Teaching cautions

- Ask the student to explain their choice, not only state an answer.
- Check that key vocabulary is understood in a new example.
- Mix representations so the skill is transferred rather than copied.

Quick lesson sequence

- Connect to prior knowledge and introduce the key vocabulary.
- Model one clear example, then solve a second example together.
- Finish with an independent check and a short student explanation.