

The 4 operations with integers and with rational numbers, choosing...

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Learning intention

- use the 4 operations with integers and with rational numbers, choosing and using efficient strategies and digital tools where appropriate

Teach and model

- using patterns to assist in establishing the rules for the multiplication and division of integers
- applying and explaining efficient strategies such as using the commutative or associative property for regrouping, partitioning, place value, patterning...
- recognising the effect of sign in the multiplication of integers; for example, $(-1)^4 = 1$ and $(-1)^5 = -1$

Check understanding

- Explain the main idea in the 4 operations with integers and with rational numbers, choosing... 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.