

Equations in contexts

Pearson Edexcel GCSE Mathematics 1MA1 • L020

Foundation and Higher • Lesson resources

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Purpose

Translate a context into a linear equation, solve it and interpret the result with appropriate units and constraints.

Vocabulary

Model: mathematical representation of a situation. Unknown: quantity to find. Constraint: condition the answer must satisfy. Interpret: state what a numerical result means in context.

Why the method works

An equation links two descriptions of the same quantity. If tickets cost £4 each plus a £3 fee and the bill is £23, $4n+3=23$ models the bill. Solving gives $n=5$ tickets. The unit and any whole-number requirement matter.

Method and checking

Define the unknown with units. Translate each relationship, keeping one-off charges separate. Solve using balanced operations. Substitute and check the result against the context.

Common errors and next attempt

If a fixed fee is multiplied by the number of items, compare one item with two. If perimeter is confused with area, trace all sides. Recheck $3n+2=17$ as five items, not £5.