Algebraic fractions and equations

Learn and practise | Free preview

A sample from this topic. The complete topic collection contains three different resources and worked solutions.

Read the explanation and worked example. Show your working; use a calculator only where asked.

What you will practise

• Operate on algebraic fractions and solve equations with stated restrictions.

• Explain a method and check the reasonableness of a result.

Useful starting skills: Use the prerequisite operations and representations shown in the worked example.

For addition and subtraction use a common denominator. For products cancel factors; for division multiply by the reciprocal of a non-zero divisor.

Before solving a rational equation, exclude values making an original denominator zero. Clear denominators carefully and check solutions in the original equation.

Worked example

Solve x/3+(x-1)/2=7.

Multiply by 6:2x+3(x-1)=42.

5x-3=42, so x=9.

Answer: x=9

Try it yourself

Name: _____ Date: _____

1. Simplify $x/4+x/6$.

2. Simplify $3/a+2/a$, $a\neq0$.

Answers and explanations

Check the method as well as the final answer. An alternative correct method is also valid.

1. 5x/12

Common denominator 12.

2. 5/a

Combine numerators over the common denominator.

Curriculum reference: VC2M10A03; VC2M10A12

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