

# Maths.scot



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## National 5 Maths

# Simplifying Algebraic Fractions

### SQA past paper and specimen paper questions and answers by topic

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**National 5 Maths  
SQA 2015 Paper 1  
Question 12**

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Simplify  $\frac{x^2 - 4x}{x^2 + x - 20}$ .

**3**

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Answer:

$$\frac{x}{x+5}$$

National 5 Maths  
SQA 2017 Paper 2  
Question 9

- 
- (a) Factorise  $4x^2 - 25$ . 1
- (b) Hence simplify  $\frac{4x^2 - 25}{2x^2 - x - 10}$ . 3
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Answers:

(a)  $(2x - 5)(2x + 5)$

(b)  $\frac{2x + 5}{x + 2}$

**National 5 Maths**  
**SQA 2019 Paper 2**  
**Question 13**

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Find an expression for the gradient of the line joining point A(6,9) to point B( $4p, 4p^2$ ).

Give your answer in its simplest form.

**3**

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Answer:

$$\frac{2p+3}{2}$$

National 5 Maths  
SQA 2022 Paper 2  
Question 12

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Simplify  $\frac{2ab + 6a}{b^2 - 9}$ .

3

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Answer:

$$\frac{2a}{b-3}$$

National 5 Maths  
SQA 2023 Paper 2  
Question 12

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Simplify  $\frac{x^2 - 16}{x^2 + x - 20}$ .

3

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Answer:

$$\frac{x+4}{x+5}$$