



THIRD SPACE  
LEARNING

# GCSE Exam Questions

Algebraic Expressions | Algebra

## GCSE Exam Questions: Algebraic Expressions

1) (a) Simplify  $4f - 2e + 3f + 5e$

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(2)

(b) Expand  $4x(2x - 7)$

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(2)  
(4 marks)

2) (a) Simplify  $\frac{15x^3y^2}{5xy^3}$

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(2)

(b) Expand and simplify  $(2x - 5)(x + 3)$

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(2)  
(4 marks)

3) (a) Expand and simplify  $5(3x + 2y) - 4(x - 5y)$

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(2)

(b) Expand and simplify  $(x - 3)^2(2x + 4)$

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(3)  
(5 marks)

## GCSE Exam Questions: Algebraic Expressions

4) Simplify fully:  $\frac{2x^2 + 2x - 12}{4x^2 - 16}$

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(3 marks)

# GCSE Exam Questions: Topic Algebraic Expressions

	Question	Answer	Marks
<b>1) (a)</b>	Simplify $4f - 2e + 3f + 5e$	$7f$ or $3e$	<b>(1)</b>
		$7f + 3e$	<b>(1)</b>
<b>(b)</b>	Expand $4x(2x - 7)$	$8x^2 \pm 28x$	<b>(1)</b>
		$8x^2 - 28x$	<b>(1)</b>
<b>2) (a)</b>	Simplify $\frac{15x^3y^2}{5xy^3}$	$3x^2$ seen	<b>(1)</b>
		$\frac{3x^2}{y}$	<b>(1)</b>
<b>(b)</b>	Expand and simplify $(2x - 5)(x + 3)$	$2x^2 - 5x + 6x - 15$	<b>(1)</b>
		$2x^2 + x - 15$	<b>(1)</b>
<b>3) (a)</b>	Expand and simplify $5(3x + 2y) - 4(x - 5y)$	$15x + 10y - 4x + 20y$	<b>(1)</b>
		$11x + 30y$	<b>(1)</b>
<b>(b)</b>	Expand and simplify $(x - 3)^2(2x + 4)$	$(x^2 - 6x + 9)(x + 2)$	<b>(1)</b>
		$2x^3 + 4x^2 - 12x^2 - 24x + 18x + 36$	<b>(1)</b>
		$2x^3 - 8x^2 - 6x + 36$	<b>(1)</b>
<b>4)</b>	Simplify fully: $\frac{2x^2 + 2x - 12}{4x^2 - 16}$	$\frac{2(x^2 + x - 6)}{4(x^2 - 4)}$	<b>(1)</b>
		$= \frac{2(x + 3)(x - 2)}{4(x + 2)(x - 2)}$ oe	<b>(1)</b>
		$= \frac{x + 3}{2(x + 2)}$	<b>(1)</b>

# Where to go next?

For more diagnostic questions, and GCSE maths revision resources and worksheets to support students in fixing any misconceptions take a look at the free Third Space Learning [GCSE maths revision](#) pages.

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