



THIRD SPACE
LEARNING

GCSE Exam Questions

Laws of Indices | Algebra

GCSE Exam Questions: Laws of Indices

1) Simplify fully:

(a) $x^2 \times x^3$

(1)

(b) $\frac{p^7}{p^3}$

(1)

(c) $(2x^4)^2$

(2)
(4 marks)

2) Simplify

(a) $6h^3m^6 \times 4h^4m^5$

(2)

(b) $\frac{12x^5y^7}{3x^2y}$

(2)
(4 marks)

3) Work out the value of:

(a) 5^0

(1)

(b) 5^{-3}

(2)

(b) $16^{\frac{3}{2}}$

(2)
(5 marks)

GCSE Exam Questions: Law of Indices

4) Find the value of y :

$$7^y \times 7^3 = 7^4 \times 7^5$$

(2 marks)

GCSE Exam Questions: Laws of Indices Answers

	Question	Answer	Marks
1)	Simplify fully:		
(a)	$x^2 \times x^3$	x^5	(1)
(b)	$\frac{p^7}{p^3}$	p^4	(1)
(c)	$(2x^4)^2$	4 or x^8 seen $4x^8$	(1) (1)
2)	Simplify:		
(a)	$6h^3m^4 \times 4h^4m^5$	24 or h^7 or m^{11} seen $24h^7m^{11}$	(1) (1)
(b)	$\frac{12x^5y^7}{3x^2y}$	4 or x^3 or y^6 seen $4x^3y^6$	(1) (1)
3)	Work out the value of:		
(a)	5^0	1	(1)
(b)	5^{-3}	125 or $\frac{1}{5^3}$ seen $\frac{1}{125}$	(1) (1)
(c)	$16^{\frac{3}{2}}$	$\sqrt{\quad}$ seen or 4 or 4^3 64	(1) (1)
4)	Find the value of y : $7^y \times 7^3 = 7^4 \times 7^5$	7^9 or 7^6 or $7^{y+3} = 7^9$ or $y + 3 = 9$ seen $y = 6$	(1) (1)

Where to go next?

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