

ALGEBRA: INDEX LAWS & SIMPLIFYING POWERS

Best Guess Mastery Worksheet (Target Grade 4/5)

I Do

Simplify $(2p^3)^5$

We Do

Simplify $(3m^2)^4$

You Do 1

Simplify $(5x^4)^3$

You Do 2

Simplify $(4y^5)^2$

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Best Guess Mastery Worksheet (Target Grade 4/5)

Challenge 1

Simplify $(2a^3b^2)^4$

Challenge 2

Simplify $(3x^2y^5)^3$

Challenge 3

Simplify $20x^6y^5 \div 4x^2y$

Challenge 4

Simplify $36a^7b^9 \div 9a^3b^4$

Answers & Worked Solutions**I Do:**

$$(2p^3)^5 = 2^5 \times (p^3)^5 = 32p^{15}$$

We Do:

$$(3m^2)^4 = 3^4 \times (m^2)^4 = 81m^8$$

You Do 1:

$$(5x^4)^3 = 5^3 \times (x^4)^3 = 125x^{12}$$

You Do 2:

$$(4y^5)^2 = 4^2 \times (y^5)^2 = 16y^{10}$$

Challenge 1:

$$(2a^3b^2)^4 = 2^4 \times (a^3)^4 \times (b^2)^4 = 16a^{12}b^8$$

Challenge 2:

$$(3x^2y^5)^3 = 3^3 \times (x^2)^3 \times (y^5)^3 = 27x^6y^{15}$$

Challenge 3:

$$(20 \div 4) \times x^{(6-2)} \times y^{(5-1)} = 5x^4y^4$$

Challenge 4:

$$(36 \div 9) \times a^{(7-3)} \times b^{(9-4)} = 4a^4b^5$$