The Laws of Exponents (Grade 8)

MEMORANDUM

Name: ..... Class: .....

Date: .....

MARK ____ / 11

Answer all questions. Show all your working — marks are awarded for method as well as the final answer. **Teacher copy: accept any correct equivalent method.**

1 Simplify: $3^4 \times 3^3$ (1)

Add: $\mathbf{3^7}$ ✓ (1)

2 Simplify: $7^8 \div 7^5$ (1)

Subtract: $\mathbf{7^3}$ ✓ (1)

3 Simplify: $(5^3)^2$ (1)

Multiply: $\mathbf{5^6}$ ✓ (1)

4 Simplify: $(3y)^4$ (2)

$\mathbf{81y^4}$ ✓✓ (2)

5 Calculate: 12^0 (1)

$\mathbf{1}$ ✓ (1)

6 Simplify: $x^5 \times x^2$ (1)

$\boldsymbol{x^7}$ ✓ (1)

7 Simplify: $(2^2 \times 2^5) \div 2^3$ (2)

$2^7 \div 2^3 = \mathbf{2^4 = 16}$ ✓✓ (2)

8 Simplify: $(a^3)^2 \times a$ (2)

$a^6 \times a^1 = \boldsymbol{a^7}$ ✓✓ (2)

TOTAL: 11 marks

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