Exponent Laws & Exponential Equations (Grade 11)

WORKSHEET

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

Date: .....

MARK ____ / 20

Answer all questions. Show all your working — marks are awarded for method as well as the final answer.

1 Simplify $16^{\frac{3}{4}}$ **(2)**

2 Simplify 2^{-3} **(1)**

3 Simplify $\frac{9^n \times 3^{n+1}}{27^n}$ **(3)**

4 Solve for x: $3^{x+2} = 81$ **(2)**

5 Solve for x: $5^{2x-1} = 125$ **(2)**

6 Solve for x: $2^{2x} - 5(2^x) + 4 = 0$ **(4)**

7 Solve for x: $3^{2x} - 4(3^x) + 3 = 0$ **(4)**

8 Simplify $8^{\frac{2}{3}}$ **(2)**

TOTAL: 20 marks

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