**Indices Rules - Basics**

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| Name : | Class : | Date : |

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| **1)** Write in index form      a) 2  $×$ 2  $×$ 2  $×$ 2     b) 5  $×$ 3  $×$ 5     c)  $\frac{7×7×7×7×7×7}{7×7}$ | [4]   |
|      d) 5  $×$ 7  $×$ 5 |  |
| **2)** Evaluate the following. Where appropriate, leave your answer as a fraction.      a)  $2^{3}$  $×$  $2^{-1}$     b)  $3^{0}$  $×$  $3^{-3}$  $×$  $3^{6}$     c)  $2^{-1}$  $÷$  $2^{2}$ | [5]   |
|      d)  $\frac{10}{10^{-1}}$     e)  $(3^{-1})^{2}$ |  |
| **3)** Evaluate        $84^{0}$ | [1]   |
| **4)** Simplify, giving your answer in index form      a)  $2^{-5}$  $×$  $2^{-1}$     b)  $7$  $×$  $7^{4}$  $×$  $7^{-3}$     c)  $(6^{-1})^{3}$ | [5]   |
|      d)  $5^{-3}$  $÷$  $5^{0}$     e)  $\frac{6^{-5}}{6^{2}}$ |  |
| **5)** Simplify        $62^{0}$ | [1]   |
| **6)** Show the following as a power of 7        $49$ | [1]   |
| **7)** Show the following as a power of 5        $25^{-2}$ | [1]   |

**Solutions for the assessment Indices Rules - Basics**

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| **1)**  a)  $2^{4}$ |      b)  $3×5^{2}$ |
|      c)  $7^{4}$ |      d)  $7×5^{2}$ |
| **2)**  a)  $4$ |      b)  $27$ |
|      c)  $\frac{1}{8}$ |      d)  $100$ |
|      e)  $\frac{1}{9}$ | **3)** 1 |
| **4)**  a)  $2^{-6}$ or  $\frac{1}{2^{6}}$ |      b)  $7^{2}$ |
|      c)  $6^{-3}$ or  $\frac{1}{6^{3}}$ |      d)  $5^{-3}$ or  $\frac{1}{5^{3}}$ |
|      e)  $6^{-7}$ or  $\frac{1}{6^{7}}$ | **5)**  $1$ |
| **6)**  $7^{2}$ | **7)**  $5^{-4}$ |