

## Module 1: Integers, exponents and scientific notation

### Part A – Calculating with exponents

Enter the following into your calculator

**7** **×** **7** **×** **7** **×** **7** **×** **7** **=**.

A calculator screen showing the expression  $7 \times 7 \times 7 \times 7 \times 7$  on the top line and the result  $16807$  on the bottom line. The screen also displays a small 'D' icon and the word 'Math' with an upward arrow.

To convert a number to its prime factors, use the FACT (factor) key after pressing

**SHIFT** **□□□**

A calculator screen showing the expression  $7 \times 7 \times 7 \times 7 \times 7$  on the top line and the result  $7^5$  on the bottom line. The screen also displays a small 'D' icon and the word 'Math' with an upward arrow.

To create the base and exponent use the exponent template **□<sup>□</sup>** and fill in the template use the arrow to move to the exponent.

A calculator screen showing the exponent template  $\square^{\square}$  on the top line. The screen also displays a small 'D' icon and the word 'Math'.

Fill in the template with

**3** **→** **5** **=**.

A calculator screen showing the expression  $3^5$  on the top line and the result  $243$  on the bottom line. The screen also displays a small 'D' icon and the word 'Math' with an upward arrow.

To factor the solution press

**SHIFT** **□□□** (FACT).

A calculator screen showing the expression  $3^5$  on the top line and the result  $3^5$  on the bottom line. The screen also displays a small 'D' icon and the word 'Math' with an upward arrow.

To raise fractions to powers use ( ) to enclose the fraction then press.

(  $\frac{\Box}{\Box}$  1  $\nabla$  5  $\blacktriangleright$  )  $x^{\Box}$  3 =

The calculator screen displays the expression  $(\frac{1}{5})^3$  on the top line and the result  $\frac{1}{125}$  on the bottom line. The status bar at the top shows a square icon and the word "Math" with an upward arrow.

You will need to convert the numerator and denominator separately to see the factored form of the original fraction. The denominator is

1 2 5 = SHIFT  $\frac{\Box}{\Box}$ .

The calculator screen displays the number "125" on the top line and the expression  $5^3$  on the bottom line. The status bar at the top shows a square icon and the word "Math" with an upward arrow.