



Department of Education, Sabaragamuwa Province – Weekly School

Subject : - Mathematics

Week : 7

Grade : 6

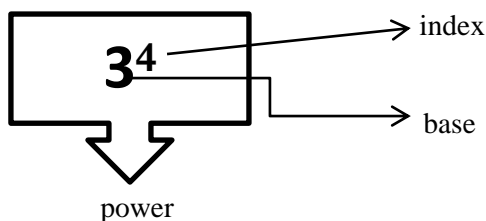
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Mawanella Zone

**Unit : - Indices**

**No. of Periods : 4**

**When a number is multiplied repeatedly by the same number when written in a concise way is called index form.**

Example : -  $5 \times 5 \times 5 = 5^3$



Show in index form.

Product	Index Form	How it is read
$3 \times 3 \times 3 \times 3$	$3^4$	Three to the power four
$2 \times 2 \times 2 \times 2 \times 2$		
$6 \times 6$		
$9 \times 9 \times 9$		
$4 \times 4 \times 4 \times 4 \times 4 \times 4$		
$7 \times 7 \times 7 \times 7$		

**Finding the value of a power.**

Example : - 1) Find the value of  $2^4$

$$\begin{aligned} 2^4 &= 2 \times 2 \times 2 \times 2 \\ &= 4 \times 2 \times 2 \\ &= 8 \times 2 \\ &= 16 \end{aligned}$$

Example :- 2) Find the value of  $2^3 \times 3^2$

$$\begin{aligned}
 2^3 \times 3^2 &= \underbrace{2 \times 2}_4 \times 2 \times 3 \times 3 \\
 &= \underbrace{4 \times 2}_8 \times 3 \times 3 \\
 &= \underbrace{8 \times 3}_{24} \times 3 \\
 &= 24 \times 3 \\
 &= 72
 \end{aligned}$$

- ❖ Complete the exercise 24.1 in your text book given in the page number 149 and 150.

### Representing a number as a power of a given number.

Example :- 01

Express the number 16 as a power of 2

$$\begin{array}{r|l}
 2 & 16 \\
 \hline
 2 & 8 \\
 2 & 4 \\
 2 & 2 \\
 & 1
 \end{array}
 \quad 16 = 2 \times 2 \times 2 \times 2 = 2^4$$

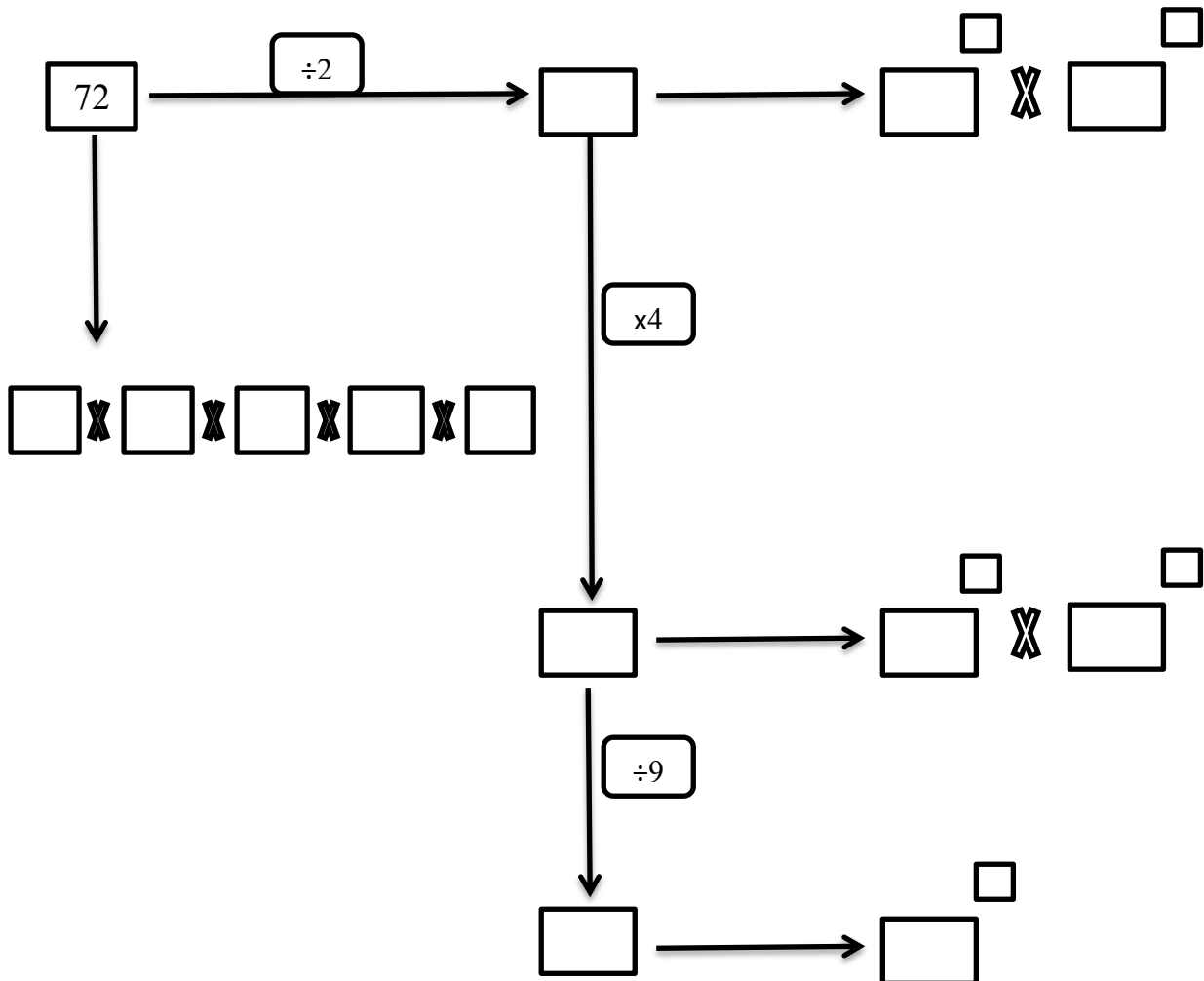
Example :- 02

Express the number 125 as a power of 5

$$\begin{array}{r|l}
 5 & 125 \\
 \hline
 5 & 25 \\
 5 & 5 \\
 & 1
 \end{array}
 \quad 125 = 5 \times 5 \times 5 = 5^3$$

- ❖ Complete the exercise 24.2 in your text book given in the page number 151.

- ❖ Fill in the blanks using the experience you got from this lesson.



- ❖ Do the miscellaneous exercises in your text book given in the page number 152.