**Indices Law**

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## What is Indices?

Indices are expressions in the form of

## Why learn Indices?

To express very big or very small number like

## 9 Laws of Indices

|  |  |  |
| --- | --- | --- |
| Law |  | Example |
| 1 |  |  |
| 2 |  |  |
| 3 |  |  |
| 4 |  |  |
| 5 |  |  |
| 6 |  |  |
| 7 |  |  |
| 8 |  | Example 1:  Example 2:  Example 3: |
| 9 |  |  |

## Exercise

|  |  |  |
| --- | --- | --- |
| 1 |  |  |
| 2 |  |  |
| 3 |  |  |
| 4 |  |  |
| 5 |  |  |

|  |  |  |
| --- | --- | --- |
|  | Find unknown in the power | Find unknown in the base |
| 1 |  |  |
| 2 |  |  |
| 3 |  |  |
| 4 |  |  |

## Exercise – Simplify the expressions

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 1 |  | 2 |  | 3 |  |
| 4 |  | 5 |  | 6 |  |
| 7 |  |  |  |  |  |

|  |  |
| --- | --- |
| 1 |  |
| 2 |  |
| 3 |  |
| 4 |  |
| 5 |  |
| 6 |  |
| 7 |  |

## Exercise – Evaluate the expressions

|  |  |
| --- | --- |
| 1 |  |
| 2 | Sub 1 into 2:  Therefore Sub y=2 into 2: |
| 3 | Sub 2 into 1:  Therefore Sub x=5 into 1: |
| 4 |  |
| 5 |  |
| 6 |  |
| 7 |  |

## Exercise – ALL 9 rules

|  |  |
| --- | --- |
| 1  Evaluate the expression |  |
| 2  Express the following in index form |  |
| 3 Simplify, result in radical form |  |

## Exercise – Solve the following

|  |  |
| --- | --- |
| 1 |  |
| 2 |  |
| 3 |  |
| 4 |  |
| 5 |  |
| 6 |  |

## Exercise – Exponential Functions

|  |  |
| --- | --- |
| 1 |  |
| 2 |  |
| 3 |  |
| 4 |  |