Laws of Indices

Study Development Quickguide

## Laws of Indices

1. $a^{x} × a^{y} = a^{x + y}$
2. $a^{x} ÷ a^{y} = a^{x - y}$
3. $a^{0} = 1$
4. $a^{-x} = \frac{1}{a^{x}}$
5. $\left(a^{x}\right)^{y} = a^{x × y}$
6. $a^{\frac{x}{y}} = \sqrt[y]{a^{x}}$

**Note:** Indices are sometimes called powers.

**Support**: Study Development offers workshops, short courses, 1 to 1 and small group tutorials.

* Join a tutorial or workshop on the [Study Development tutorial and workshop webpage](https://www.yorksj.ac.uk/students/study-skills/study-development-tutorials/) or search ‘YSJ study development tutorials.’
* Access our Study Success resources on the [Study Success webpage](https://www.yorksj.ac.uk/students/study-skills/study-success/) or search ‘YSJ study success.’