**Surds Law**

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## Definition

1. Evaluate this expression can be evaluated exactly
2. Evaluate this expression **cannot** be evaluated exactly

In b. this are called SURDS, which are irrational numbers that cannot be expressed as where m and n are integers

## Why learn surds?

As indicated above, it is to simplify irrational numbers in radical form without the need to evaluate the expression first

## Rules

|  |  |  |
| --- | --- | --- |
|  | Rules | Example |
| 1 |  |  |
| 2 |  |  |
| 3 |  |  |
| 4 |  |  |
| 5 |  |  |
| 6 |  | Prove: |

## Exercise - Example

|  |  |
| --- | --- |
| E.g. 1  Solve |  |
| E.g. 2  Solve |  |
| E.g. 3  Reduce, using conjugates |  |

## Exercise -

|  |  |
| --- | --- |
| 1  Simplify |  |
| 2  Simplify |  |
| 3  Simplify |  |
| 4  Find a and b |  |
| 5 |  |