Transformations of Graphs

It is important to understand the effects of simple transformations on the graph .

:

|  |  |
| --- | --- |
| Function | Effect |
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We can think of it like this:

|  |  |  |
| --- | --- | --- |
|  | Affects which axis? | What we expect or opposite? |
| Change **inside** |  |  |
| Change **outside** |  |  |

Examples: Describe the transformation

Example

1. Sketch
2. Sketch
3. Sketch . On the same axes, sketch , where .
4. Sketch . On the same axes, sketch the graph with equation .

Reflections

Example

If , sketch and on the same axes.

Test your understanding

1. If , sketch and on the same axes.
2. Sketch the graph of , ensuring you indicate any intercepts with the axes.

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