# Limits
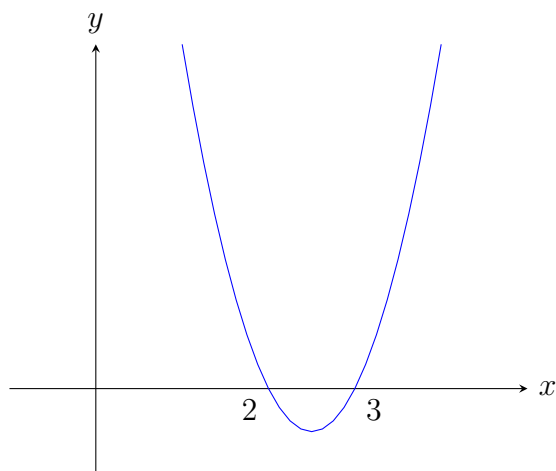
## Example

Consider the quadratic function $f(x) = x^2 - 5x + 6$:



What happens to $f(x)$ as $x \to 2$, but $x \neq 2$?

| $x$ | $f(x)$ |
|-------|-----------|
| 2.1 | $-0.09$ |
| 2.01 | $-0.0099$ |
| 2.001 | $-0.000999$ |
| 2 | |
| 1.999 | 0.001001 |
| 1.99 | 0.0101 |
| 1.9 | 0.11 |

It appears that from either direction, $f(x) \to 0$.