



Function End Behaviour (Polynomials) - Function to Behaviour

1 What end behaviour would this function have?

$$f(x) = 2x^3 + 3x^2 + 3x$$

- | | |
|---|--|
| <p>A
as $x \rightarrow -\infty, y \rightarrow -\infty$
as $x \rightarrow \infty, y \rightarrow -\infty$</p> | <p>B
as $x \rightarrow -\infty, y \rightarrow -\infty$
as $x \rightarrow \infty, y \rightarrow \infty$</p> |
|---|--|

2 What end behaviour would this function have?

$$f(x) = -2x + 2$$

- | | |
|---|--|
| <p>A
as $x \rightarrow -\infty, y \rightarrow -\infty$
as $x \rightarrow \infty, y \rightarrow -\infty$</p> | <p>B
as $x \rightarrow -\infty, y \rightarrow \infty$
as $x \rightarrow \infty, y \rightarrow -\infty$</p> |
|---|--|

3 What end behaviour would this function have?

$$f(x) = -5x^7 - 5x^6 - 5x^5$$

- | | |
|--|---|
| <p>A
as $x \rightarrow -\infty, y \rightarrow \infty$
as $x \rightarrow \infty, y \rightarrow -\infty$</p> | <p>B
as $x \rightarrow -\infty, y \rightarrow \infty$
as $x \rightarrow \infty, y \rightarrow \infty$</p> |
|--|---|

4 What end behaviour would this function have?

$$f(x) = 2x^3 - 3x^2 - 3x$$

- | | |
|--|---|
| <p>A
as $x \rightarrow -\infty, y \rightarrow -\infty$
as $x \rightarrow \infty, y \rightarrow \infty$</p> | <p>B
as $x \rightarrow -\infty, y \rightarrow -\infty$
as $x \rightarrow \infty, y \rightarrow -\infty$</p> |
|--|---|

5 What end behaviour would this function have?

$$f(x) = -3x^4 - 5x^3 - 5x^2$$

- | | |
|--|---|
| <p>A
as $x \rightarrow -\infty, y \rightarrow \infty$
as $x \rightarrow \infty, y \rightarrow -\infty$</p> | <p>B
as $x \rightarrow -\infty, y \rightarrow -\infty$
as $x \rightarrow \infty, y \rightarrow -\infty$</p> |
|--|---|

6 What end behaviour would this function have?

$$f(x) = 5x^3 - 2x^2 - 2x$$

- | | |
|--|--|
| <p>A
as $x \rightarrow -\infty, y \rightarrow -\infty$
as $x \rightarrow \infty, y \rightarrow \infty$</p> | <p>B
as $x \rightarrow -\infty, y \rightarrow \infty$
as $x \rightarrow \infty, y \rightarrow -\infty$</p> |
|--|--|

7 What end behaviour would this function have?

$$f(x) = 3x^6 + 3x^5 + 3x^4$$

- | | |
|---|--|
| <p>A
as $x \rightarrow -\infty, y \rightarrow \infty$
as $x \rightarrow \infty, y \rightarrow \infty$</p> | <p>B
as $x \rightarrow -\infty, y \rightarrow \infty$
as $x \rightarrow \infty, y \rightarrow -\infty$</p> |
|---|--|

8 What end behaviour would this function have?

$$f(x) = -4x^5 + 2x^4 + 2x^3$$

- | | |
|---|--|
| <p>A
as $x \rightarrow -\infty, y \rightarrow \infty$
as $x \rightarrow \infty, y \rightarrow \infty$</p> | <p>B
as $x \rightarrow -\infty, y \rightarrow \infty$
as $x \rightarrow \infty, y \rightarrow -\infty$</p> |
|---|--|