



## Rational Function Inequalities - Three Factors with Multiplicity over Binomial - Sign Change at a Point

1

Does the sign of this rational function change at  $x = -4$ ?

$$\frac{(x + 3)^4(x + 2)^2(x - 4)^3}{x - 1}$$

A

B

No

Yes

Does the sign of this rational function change at  $x = 2$ ?

$$\frac{(x + 4)^2(x + 1)^2(x - 1)^5}{x - 2}$$

A

B

Yes

No

3

Does the sign of this rational function change at  $x = 0$ ?

$$\frac{(x + 2)^4(x + 1)^4(x - 1)}{x}$$

A

B

Yes

No

4

Does the sign of this rational function change at  $x = 2$ ?

$$\frac{(x + 4)(x + 1)^3(x - 4)^4}{x + 4}$$

A

B

No

Yes

5

Does the sign of this rational function change at  $x = -2$ ?

$$\frac{(x + 2)^2(x + 1)^3(x - 1)^4}{x}$$

A

B

No

Yes

6

Does the sign of this rational function change at  $x = -1$ ?

$$\frac{x^5(x - 2)^2(x - 4)^2}{x + 1}$$

A

B

No

Yes

7

Does the sign of this rational function change at  $x = 4$ ?

$$\frac{(x + 4)(x + 2)^2(x - 4)^2}{x + 1}$$

A

B

No

Yes

8

Does the sign of this rational function change at  $x = 3$ ?

$$\frac{(x + 3)(x + 1)^5(x - 4)^4}{x - 2}$$

A

B

Yes

No