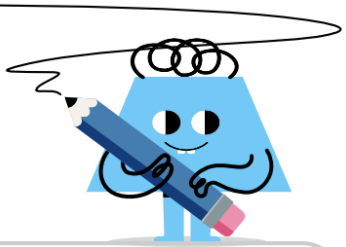
Name

# Rational Functions and Asymptotes - Hole at Location (Expanded)



**1**

Is there a hole at x=-4 when this polynomial is divided by this binomial?

$$f(x) = \frac{x^2 - 4}{x^2 + 2x - 8}$$

| A | B |
|---|---|
| Yes | No |

**2**

Is there a hole at x=-4 when this polynomial is divided by this binomial?

$$f(x) = \frac{x^2 - 16}{x - 4}$$

| A | B |
|---|---|
| No | Yes |

**3**

Is there a hole at x=-4 when this polynomial is divided by this binomial?

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

| A | B |
|---|---|
| Yes | No |

**4**

Is there a hole at x=-4 when this polynomial is divided by this binomial?

$$f(x) = \frac{x^2 - 2x - 8}{x^2 - 6x + 8}$$

| A | B |
|---|---|
| No | Yes |

**5**

Is there a hole at x=-1 when this polynomial is divided by this binomial?

$$f(x) = \frac{x^2 - x - 2}{x^2 - x - 2}$$

| A | B |
|---|---|
| No | Yes |

**6**

Is there a hole at x=4 when this polynomial is divided by this binomial?

$$f(x) = \frac{x - 4}{x^2 - 4x}$$

| A | B |
|---|---|
| No | Yes |

**7**

Is there a hole at x=2 when this polynomial is divided by this binomial?

$$f(x) = \frac{x^2 + 5x + 6}{x^2 - x - 6}$$

| A | B |
|---|---|
| No | Yes |

**8**

Is there a hole at x=2 when this polynomial is divided by this binomial?

$$f(x) = \frac{x^2 + 6x + 8}{x + 2}$$

| A | B |
|---|---|
| Yes | No |