

## Solving a Rational Equation

## Solving a Rational Equation

Solve the Rational Equation:

$$\frac{1}{x-1} = 1$$

## Solving a Rational Equation

Solve the Rational Equation:

$$\frac{1}{x-1} = 1$$

We can start by multiplying both sides by  $(x-1)$  to reduce the fraction.

## Solving a Rational Equation

Solve the Rational Equation:

$$\frac{1}{x-1} = 1$$

We can start by multiplying both sides by  $(x-1)$  to reduce the fraction.

$$(x-1) \cdot \frac{1}{x-1} = 1 \cdot (x-1)$$

## Solving a Rational Equation

Solve the Rational Equation:

$$\frac{1}{x-1} = 1$$

We can start by multiplying both sides by  $(x-1)$  to reduce the fraction.

$$(x-1) \cdot \frac{1}{x-1} = 1 \cdot (x-1) = x-1$$

## Solving a Rational Equation

Solve the Rational Equation:

$$\frac{1}{x-1} = 1$$

We can start by multiplying both sides by  $(x-1)$  to reduce the fraction.

$$1 = \cancel{(x-1)} \cdot \frac{1}{\cancel{x-1}} = 1 \cdot (x-1) = x-1$$

## Solving a Rational Equation

Solve the Rational Equation:

$$\frac{1}{x-1} = 1$$

We can start by multiplying both sides by  $(x-1)$  to reduce the fraction.

$$1 = \cancel{(x-1)} \cdot \frac{1}{\cancel{x-1}} = 1 \cdot (x-1) = x-1$$

Leaving us with the equation:

## Solving a Rational Equation

Solve the Rational Equation:

$$\frac{1}{x-1} = 1$$

We can start by multiplying both sides by  $(x-1)$  to reduce the fraction.

$$1 = \cancel{(x-1)} \cdot \frac{1}{\cancel{x-1}} = 1 \cdot (x-1) = x-1$$

Leaving us with the equation:

$$1 = x - 1$$



## Solving a Rational Equation

Solve the Rational Equation:

$$\frac{1}{x-1} = 1$$

We can start by multiplying both sides by  $(x-1)$  to reduce the fraction.

$$1 = \cancel{(x-1)} \cdot \frac{1}{\cancel{x-1}} = 1 \cdot (x-1) = x-1$$

Leaving us with the equation:

$$1 = x - 1$$

Which we can solve by adding 1 to get:  $x = 2$

## Solving a Rational Equation

Solve the Rational Equation:

$$\frac{1}{x-1} = 1$$

We can start by multiplying both sides by  $(x-1)$  to reduce the fraction.

$$1 = \cancel{(x-1)} \cdot \frac{1}{\cancel{x-1}} = 1 \cdot (x-1) = x-1$$

Leaving us with the equation:

$$1 = x - 1$$

Which we can solve by adding 1 to get:  $x = 2$

**Conclusion:** The solution to  $\frac{1}{x-1} = 1$  is  $x = 2$