

Name _____

Date _____

Solving Exponential Equations - Step-by-Step Lesson

Solve the exponential equation: $4^{x-5} = 1024^{x-5}$



Explanation:

Step 1) See what can easily be reduced or simplified before you start

$$1024 = 4^5$$

Step 2) Now rewrite the equation with that change in place.

$$4^{x-5} = (4)^{5(x-5)}$$

$$x - 5 = 5(x-5)$$

$$x - 5 = 5x - 20$$

$$x = 5x - 20 = -4x = -20$$

$$x = 5$$

