

Name _____

Date _____

Solving Exponential Equations - Guided Lesson Explanation

Explanation#1

$$7^{2x+5} = 1/(343)^3$$

$$2x+5 = (343)^{-3}/1$$

$$2x+5 = -3$$

$$2x = -3 - 5 = x = -8/2$$

$$x = -4$$

Explanation#2

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

$$x - 4 = 4(x-4)$$

$$x - 4 = 4x - 16$$

$$x = 4x - 12 = -3x = -12$$

$$x = 4$$

Explanation#3

$$8^{3x+6} = 1/(512)^3$$

$$3x+6 = (512)^{-3}/1$$

$$3x+6 = -3$$

$$3x = -3 - 6 = x = -9/3$$

$$x = -3$$

