

Solving Exponential Equations (lacking a common base)- Guided Lesson Explanation**Explanation#1**

Step 1) Rewrite $8^h = 20$ as $h \log 8 = \log 20$

Step 2) formula: $h \log 8 = \log 20$

$$h = \log 20 / \log 8$$

$$h = 1.30 / 0.90$$

$$h = 1.44$$

Explanation#2

Step 1) Rewrite $3^{x-4} = 4$ as $x - 4 \log 3 = \log 4$

Step 2) formula: $x - 4 \log 3 = \log 4$

$$x - 4 = \log 4 / \log 3$$

$$x = (0.60 / 0.47) + 4$$

$$x = 5.27$$

Explanation#3

Step 1) Rewrite $(0.33)^w = 3$ as $w \log 0.33 = \log 3$

Step 2) formula: $w \log 0.33 = \log 3$

$$w = \log 3 / \log 0.33$$

$$w = 0.47 / -0.48$$

$$w = -.98$$

