Name: _____ Date: _____

Learning Goal 7.2	Solving equations with same base and with different bases, including base e.

More Questions

1. Solve and check.

   a. $5^{x+1} \times 5^{x} = 625$

   b. $\dfrac{8^{x+6}}{16^{2x-1}} = 32^{3x-4}$

   c. $2^{x-1} \times 4^{3x} = \left(\dfrac{1}{8}\right)^{4-x}$

   d. $(5^{3})^{x^{2}+5} = \left(\dfrac{1}{5^{2}}\right)^{-2x^{2}+4}$

2. Strontium -90 has a half – life of 25 years.
   a. Write an equation to determine the amount of Strontium -90 remaining as a function of the number of years.
   b. How much time has elapsed if only $1/32$ of the strontium -90 remains in a sample?
   c. Approximately how long will it take until 100 gram sample decays to 15 grams?