

# Comprehensive Review #10

Topics:

Lesson 82 - Exponential Equations

Lesson 88 - Exponential Functions (Growth and Decay)

Solve:

1.  $3^{x+2} = 5^{2x+1}$

2.  $3^{x+6} = 4^{2x+5}$

3.  $4^{x-2} = 3^{2x+5}$       [A] -9.403      [B] -10.723      [C] -8.943      [D] -10.193

4.  $5^{x-6} = 4^{2x-5}$       [A] -1.813      [B] -3.133      [C] -1.093      [D] -2.343

5. Find the number of grams of carbon-14 remaining after 17,190 yrs if 37 grams of the isotope were initially present. The half-life of carbon-14 is 5730 yrs.

6. Find the number of grams of polonium remaining after 276 days if 55 grams of the isotope were initially present. The half-life of polonium is 138 days.

