

Quiz 8

Solve the equation for x :

$$4(2^{-2x+3} + 3/4) = 11.$$

Solution. Distribute the 4 and subtract 3 from both sides to get $2^2 \cdot 2^{-2x+3} = 11 - 3 = 8 = 2^3$, which is equivalent to $2^{-2x+5} = 2^3$. This happens only if $-2x + 5 = 3$. Thus $-2x = -2$, and $x = 1$.