Substitute 4.2 for *R* in the formula:  $4.2 = \log \left( \frac{A}{A_0} \right)$ 

Rewrite as an exponential equation:  $10^{4.2} = \frac{A}{A_0}$ 

Use a calculator and multiply both sides by  $A_0$ : A=15,  $849A_0$