A star of spectral class **F0** with an intrinsic color of **(B - V) = +0.27** has an absolute magnitude of **M_V=+3.2**. It's measured at apparent magnitudes of **m_B=+13.2** and **m_V=+12.3**. Find the reddening/color excess, the extinction and corrected m_V, and finally approximate the distance to the star.

Reddening/Color Excess
$(B - V) = m_B - m_V = 13.2 - 12.3 = 0.9$
$(B - V)_0 = 0.27$
$E(B - V) = (B - V) - (B - V)_0 = 0.9 - 0.27 =$ **0.63**

Extinction and Correction
$A_V = 3.3 * E(B - V) = 3.3(0.63) =$ **2.08**
$m_{V,corr} = m_V - A_V = 12.3 - 2.08 =$ **10.2**

Approximate Distance
$m - M = 5\log(D) - 5$
$10.2 - 3.2 = 5\log(D) - 5$
$7.0 = 5\log(D) - 5$
$5\log(D) = 12.0$
$\log(D) = 2.4$
$D = 10^{2.4} =$ **251 pc**