

Answer on Question# 61084 --Physics -- Astronomy -- Astrophysics

The distance modulus of a star is -0.1 . At what distance is it from the earth?

Answer:

$$\mu = -0.1$$

We have that the in parsecs

$$\log_{10} d = 1 + \frac{\mu}{5}$$

$$d = 10^{0.98} pc = 9.55 pc$$

$$1 pc = 206265 a.u.$$

$$d = 9.55 pc = 1969815 a.u.$$