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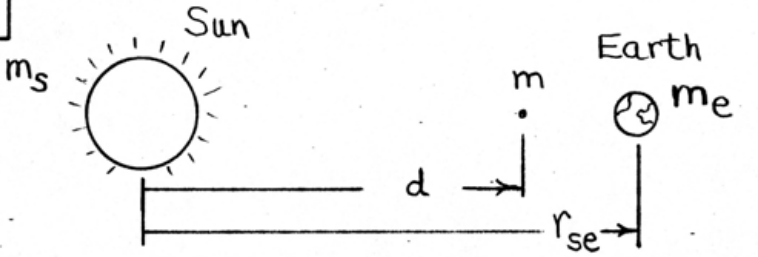

Newton's Universal Gravitational Law:

$$\frac{Gmm_s}{d^2} = \frac{Gmm_e}{(r_{se}-d)^2}$$

$$d^2[m_s - m_e] - d[2m_s r_{se}] + m_s r_{se}^2 = 0$$

Substitute $m_e = 5.976\,(10^{24})$ kg,

$m_s = 333\,000\,[5.976\,(10^{24})]$ kg,

and $r_{se} = 149.6\,(10^9)$ m,

Then solve the quadratic to obtain

$d = 149.3\,(10^9)$ m

or $d = 149.9\,(10^9)$ m