

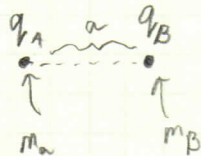
Ximble, Zachary

EM Griffiths

06/30/18

1/1

2.32



$$V(\text{point A}) = \frac{k q_B}{a} \Rightarrow V_A = \sqrt{\frac{2W_A}{m_A}} = \sqrt{\frac{2k q_B q_A}{m_A a}}$$

$$V(\text{point B}) = \frac{k q_A}{a} \Rightarrow V_B = \sqrt{\frac{2W_B}{m_B}} = \sqrt{\frac{2k q_A q_B}{m_B a}}$$

2.33

$$k \sum_{j \neq 1}^{j=\infty} \frac{q_j}{r_{1j}} = k \sum_{j=-\infty}^{-1} \frac{q_j}{r_{1j}} + k \sum_{j=1}^{\infty} \frac{q_j}{r_{1j}} = k \sum_{j=-\infty}^{-1} \frac{(-1)^j q}{j a} + k \sum_{j=1}^{\infty} \frac{(-1)^j q}{j a} = \frac{q}{a} k \sum_{j=1}^{\infty} \left(\frac{(-1)^{j+1} + (-1)^j}{j} \right)$$

$$= \frac{q}{a} \sum_{j=1}^{\infty} \left(\frac{(-1)^j (-1+1)}{j} \right) ?$$