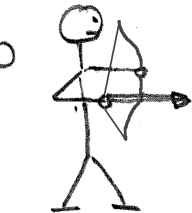


Before

$$(v_{ix})_{\text{arrow}} = 0$$

$$(v_{ix})_{\text{archer}} = 0$$



$$m_{\text{archer}} = 50 \text{ kg}$$

$$m_{\text{arrow}} = 100 \text{ g}$$

After



$$(v_{fx})_{\text{archer}}$$

Find:  $(v_{fx})_{\text{archer}}$



$$(v_{fx})_{\text{arrow}} = 100 \text{ m/s}$$