So, use conservation of momentum to figure out the boot's speed:

$$\underset{\text{before}}{(\text{Al} + \text{boot})(-0.07\ ^{m}/_{s})} = \underset{\text{after}}{(\text{Al})(+2.96\ ^{m}/_{s}) + (\text{boot})\,V_B}$$

$$(m_A + m_B)(-0.07\ ^{m}/_{s}) = m_A(2.96\ ^{m}/_{s}) + m_B V_B$$

$$\rightarrow \quad V_B = \frac{(m_A + m_B)(-0.07\ ^{m}/_{s}) - m_A(2.96\ ^{m}/_{s})}{m_B}$$

$$= \frac{(80\text{ kg})(-0.07\ ^{m}/_{s}) - (79\text{ kg})(2.96\ ^{m}/_{s})}{1\text{ kg}}$$

$$= -239\ ^{m}/_{s}$$

The relative speed of the boot and Al is

$\approx 242\ ^{m}/_{s}$

which is how fast Al must have thrown the boot away from his hand.

Wow!