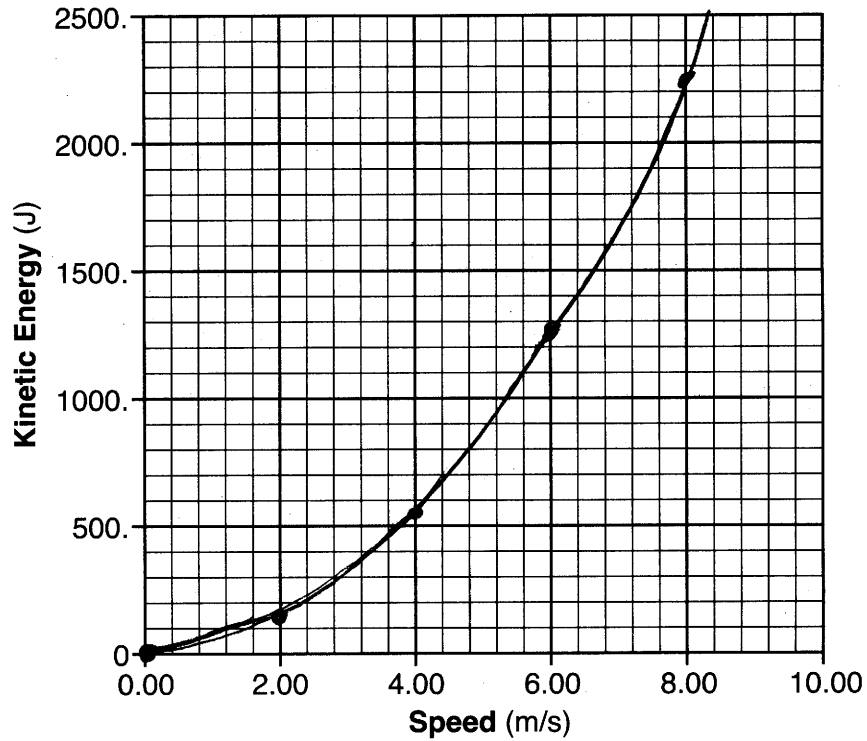


Part C

66-67

Kinetic Energy vs. Speed



68-69

$$\begin{aligned}
 KE &= \frac{1}{2} m v^2 \Rightarrow m = \frac{2 KE}{v^2} \\
 &= \frac{2(2240 \text{ J})}{(8 \text{ m/s})^2} \\
 &= 70 \text{ kg}
 \end{aligned}$$

70 $KE = \frac{1}{2} m v^2$ SINCE THE SOCCER PLAYER HAS LESS MASS FOR THE SAME SPEED HE WILL HAVE LESS KINETIC ENERGY