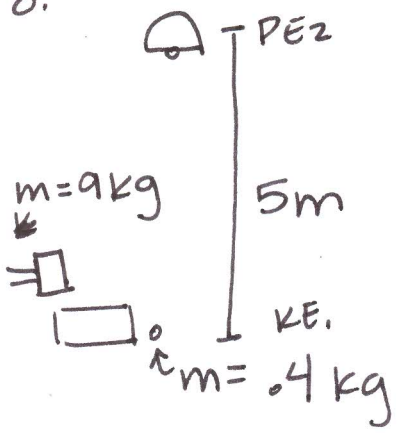
8.



$.25\ KE_{Hammer} = TE_{piece\ of\ metal}$

↑ given information

$TE_{p\ of\ m} = PE_2$

$= mgh$

$= (.4kg)(9.8 m/s^2)(5m)$

$= 19.6\ J$

$.25\ KE_{Hammer} = 19.6\ J$

$KE_{hammer} = 78.4\ J$

$KE = \frac{1}{2}mv^2$

$78.4 = \frac{1}{2}(9kg)v^2$

$\boxed{v = 4.174\ m/s}$

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9. $1\ KW = 1000\ W$

$P = \frac{W}{t}$

$P = 1000\ W$

$t = 1\ hr \Rightarrow 3600\ s$

$1000\ W = \frac{W}{(3600s)}$

$\boxed{W = 3{,}600{,}000\ J}$