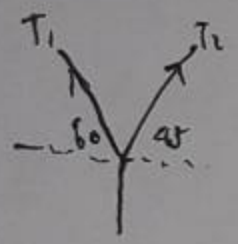
Quiz Tutor FMIK.

1. 

$W_2 = T_2 . s . \cos 45$

$W_2 = 1295 . 5 . \frac{\sqrt{2}}{2}$

$W_2 = 3237,5\sqrt{2}$ J

$W_1 = T_1 . s . \cos 60$

$W_1 = 1830 . 5 . \frac{1}{2}$

$= 4575$ J

2. $a = 3 ms^{-2}$, $m = 60kg$, $k = 2500$ N/m

x = ?

E_p = ?

$\Sigma F = k . \Delta x$

$Mg + ma = k . \Delta x$

$600 + 60 . 3 = 2500 . \Delta x$

$\frac{780}{2500} = \Delta x$

$0,312 m = \Delta x$

$E_p = \frac{1}{2} k (\Delta x)^2$

$= \frac{1}{2} 2500 . (0,312)^2$

$= 121,68$ J

3. $m_p = 0,15$ kg ; $g = 9,8 m/s^2$

$m_k = 3$ kg , $v_k = 0$ m/s

$h = 0,4$ m

v_{peluru} = ?

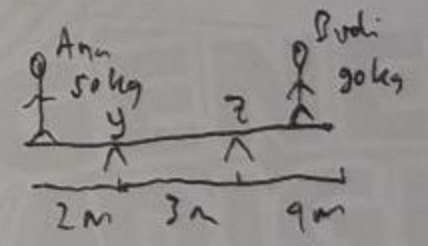
$v' = \sqrt{2gh} = \sqrt{2 . 9,8 . 0,4} = \sqrt{7,84} = 2,8$

$m_p . v_p + m_k . v_k = \Sigma m . v'$

$0,15 . v_p + 0 = (0,15 + 3) . 2,8$

$0,15 v_p = 8,82$

$v_p = 58,8$ m/s

4. 

Beban tumpuan = 100 kg pada 0,5m dari z

$0,5 . 100 + 5 . 50 = x . 90$

$50 + 250 = x . 90$

$300 = x . 90$

$3,333 m = x$

jarak maksimum budi berjalan adalah 3,333 m dari titik z.