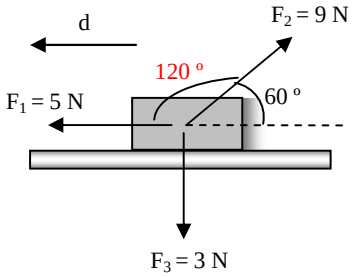
Name: **Quiz (4)-Sec (8)-Ch(7)** **S.N:**

ID : **Key** Phys 101 (Term 032)-(*F. Enaya*)

Q. The figure shows three forces applied to a trunk that moves leftward by 3 m over a frictionless floor. The force magnitudes indicated in the figure. During the displacement :



a. What is the net work done on the trunk by the three forces ?

$W_{net} = W_1 + W_2 + W_3 = (5 \times 3 \times \cos 0\ ) + (\ 9 \times 3 \times \cos 120\ ) + (\ 3 \times 3 \times \cos 90)$

$W_{net} = 1.5$ J

b. Does the kinetic energy of the trunk increase or decrease? ***Explain Why***.

The kinetic energy (KE) will increase, because $W_{net} = \Delta KE = (\ KE_f - KE_i\ )$

Since $W_{net} > 0 \Rightarrow KE_f - KE_i > 0 \Rightarrow KE_f > KE_i$