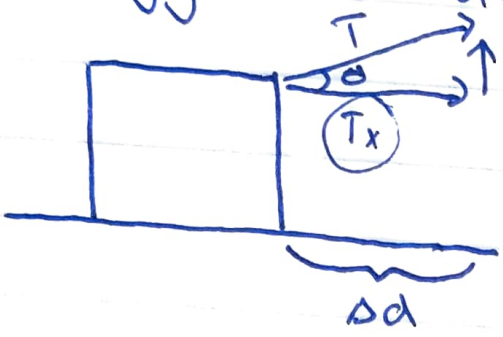
change in location

energy is the ability to do work



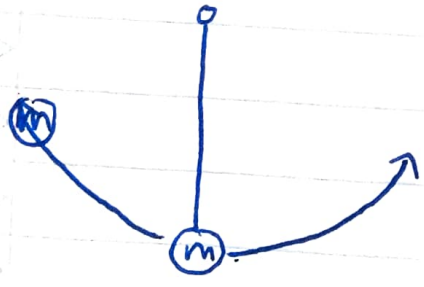
*breaks do - work, can cos180 OR just have force as -.

$KE = \frac{1}{2}mv^2$
$W = F(\Delta d)(\cos\theta)$
can do work, so has energy
KE gives amount

↑ and ↗ are the same work, they just have dif paths, making one easier.

Potential Energy (PE) = mgh

Practice Problem



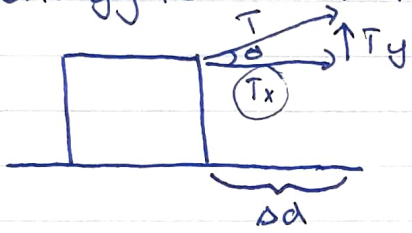
find speed

as mass moves down, the force vector is shrinking.
at bottom of swing, there is no horizontal force.
NO FIXED FORCE
relative to the bottom of the swing, she'll start at some height. So, her energy is just mgh.
potential

Energy Notes

For work to exist, there must be an applied force and there must be a change in location

energy is the ability to do work



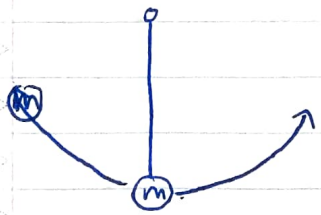
*breaks do - work, can use cos180 OR just have force as −.

$KE = \frac{1}{2}mv^2$
$W = F(\Delta d)(\cos\theta)$
} can do work, so has energy, KE gives amount

↑ and ↗ are the same work, they just have dif paths, making one easier.

Potential Energy (PE) = mgh

Practice Problem



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at bottom all of mgh has been transformed into KE

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