

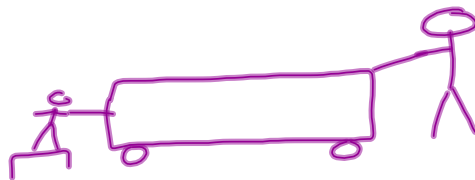
1/30/13 NEWTON'S 1ST LAW

IT TAKES AN UNBALANCED (NET)

(OVERALL) FORCE TO CHANGE THE MOTION
OF AN OBJECT.

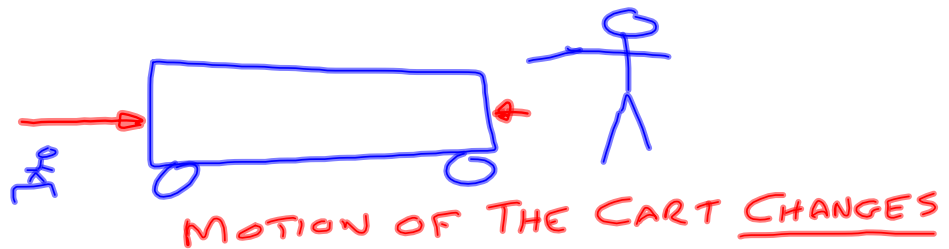
~~FORCES MAKE THINGS MOVE~~
~~FORCES KEEP THINGS MOVING~~

A Force Is BALANCED WHEN THERE IS ANOTHER FORCE ON THE SAME OBJECT IN THE OPPOSITE DIRECTION THAT IS THE SAME SIZE.



WHEN
BALANCED,
THE MOTION OF CART
DOES NOT CHANGE

UNBALANCED FORCES EXIST WHEN
THERE IS NOT AN EQUAL FORCE ACTING
IN THE OPPOSITE DIRECTION ON THE SAME
OBJECT.



IS THERE AN UNBALANCED FORCE ON THE OBJECT?

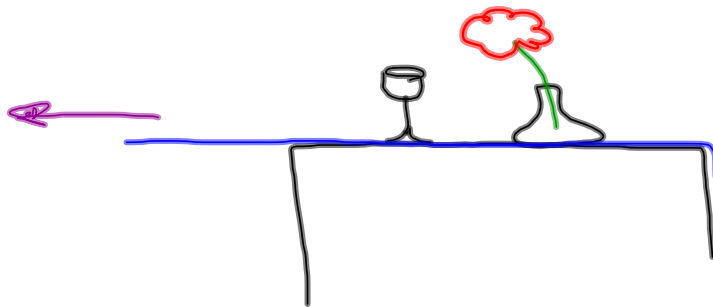
YES \rightarrow THE MOTION WILL CHANGE

NO \rightarrow THE MOTION WILL NOT CHANGE

IS THE MOTION OF THE OBJECT CHANGING?

YES \rightarrow THERE IS AN UNBALANCED FORCE

NO \rightarrow FORCES ARE BALANCED.



IF OBJECTS REMAIN MOTIONLESS,
FORCES ARE BALANCED.

THE CHICKEN WILL CONTINUE FORWARD
@ 60 km/sec BECAUSE THERE IS
NO UNBALANCED FORCE TO CHANGE ITS
MOTION.

↳ THE ANSWER TO #1 ON THE
NEWTON'S 1ST LAW WORK SHEET.