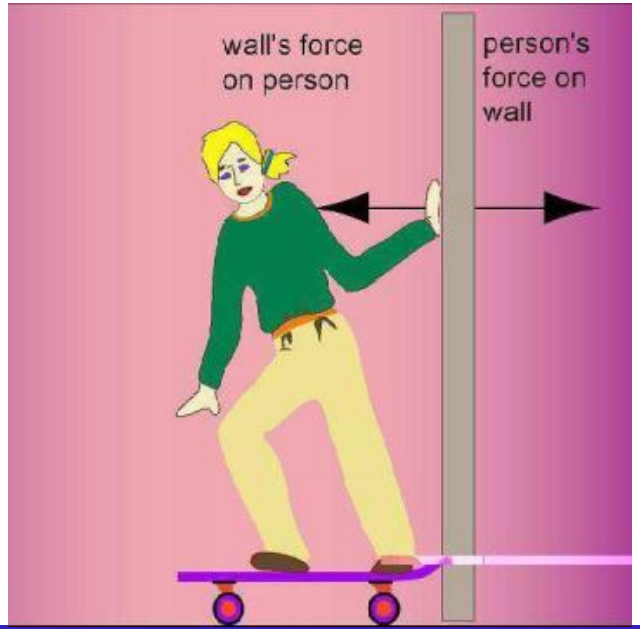
# Newton's 3rd Law

# Newton's Third Law

"For every action there is an EQUAL and OPPOSITE reaction.

- This law focuses on action/reaction pairs (forces)
- They NEVER cancel out because the forces are acting on different objects. (Two different FBD)




All you do is SWITCH the wording!

- PERSON on WALL
- WALL on PERSON

# N.T.L Examples

Action:  HAMMER HITS NAIL
Reaction: NAIL HITS HAMMER

Action: Earth pulls on YOU
Reaction: YOU pull on the earth

# But wait there's more.

- A hammer hits a nail and the forces they exert on each other are equal.
  - Why then does the nail have a larger acceleration?
  - If you are pulling on the Earth, why does it not accelerate towards you?
  - A book rests on a level table. The table exerts a normal force on the book. What is the reaction force?