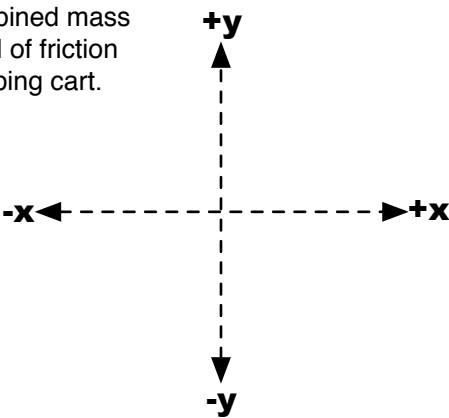


Cycle 8: 2nd Law

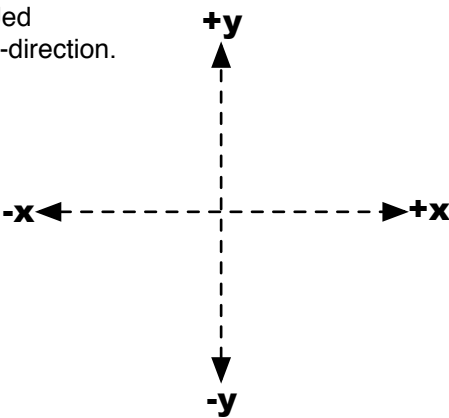
Speed up and slow down A

Lisa pushes Jed in the shopping cart (combined mass 60 kg) with a force of 180 N. There is 60 N of friction due to the squeaky old wheels of the shopping cart. They start from rest.

- a) Calculate the Speed Change Factor.
- b) Fill in the table up to t = 4 s.



Then after t = 4 s, Lisa stops pushing, and Jed continues with only the friction force in the x-direction.



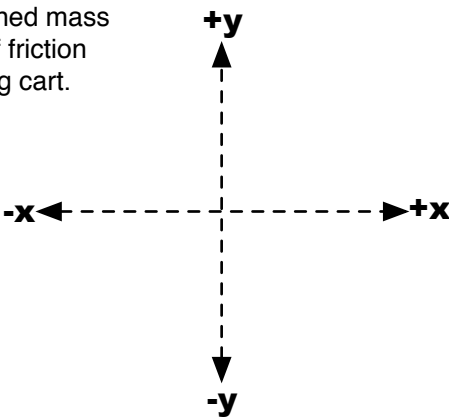
Speed at t = 0	Speed at t = 1 s	Speed at t = 2 s	Speed at t = 3 s	Speed at t = 4 s	Speed at t = 5 s	Speed at t = 6 s	Speed at t = 7 s	Speed at t = 8 s
0 m/s								

Cycle 8: 2nd Law

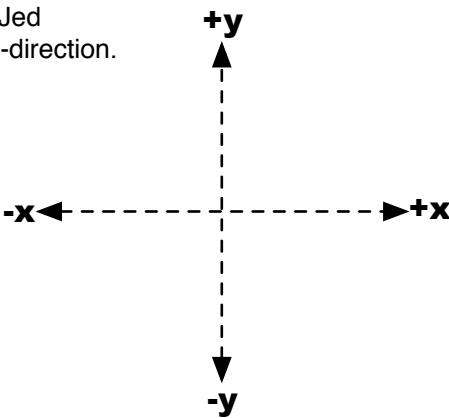
Speed up and slow down A

Jane pushes Lou in the shopping cart (combined mass 50 kg) with a force of 200 N. There is 50 N of friction due to the squeaky old wheels of the shopping cart. They start from rest.

- a) Calculate the Speed Change Factor.
- b) Fill in the table up to t = 3 s.



Then after t = 3 s, Jane stops pushing, and Jed continues with only the friction force in the x-direction.



Speed at t = 0	Speed at t = 1 s	Speed at t = 2 s	Speed at t = 3 s	Speed at t = 4 s	Speed at t = 5 s	Speed at t = 6 s	Speed at t = 7 s	Speed at t = 8 s
0 m/s								