

## Unit 3, Causes of Motion

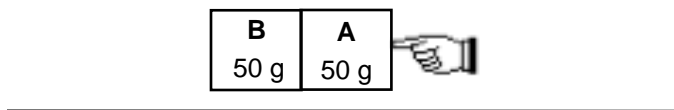
### Exercise 3, Application of Newton's 3<sup>rd</sup> Law


1. A small book lies on top of a larger book, which rests on a table. Sketch a picture of this situation. Draw and label a separate force diagram for each book. Label any Newton's 3<sup>rd</sup> Law pairs that occur in your force diagrams.

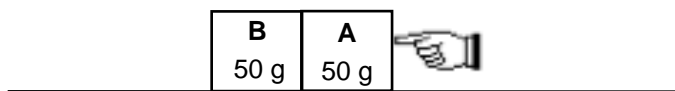
2. A person exerts an upward force of 40 N to hold a bag of groceries. Sketch a picture of this situation. Draw and label a separate force diagram for the person and the bag of groceries. Label any Newton's 3<sup>rd</sup> Law pairs that occur in your force diagrams.

3. For each situation shown below, draw a force diagram for block A, a force diagram for block B, and identify any Newton's 3<sup>rd</sup> Law pairs.


a.  constant  $v$

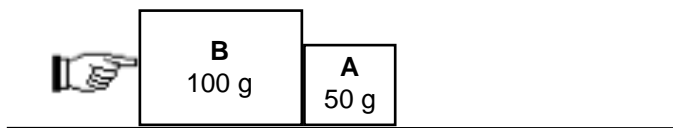


 constant  $a$



b.

constant  $a$  



c.