

PhyzJob: Newton III Force Pairs
 identifying agents of force



On the back of this sheet, draw a diagram of each situation described below. Identify the force acting (in terms of the objects that are interacting), and the Newton's third law force pair. Be sure to draw the forces in your diagram.

	“Action” Force	“Reaction” Force
1. Apple falls to the ground.	Earth pulls apple down.	Apple pulls earth up.
2. You walk forward.	You push ground back.	Ground pushes you forward.
3. Thrown ball travels through air.	Earth pulls ball down.	Ball pulls Earth up.
4. Thrown ball is caught by catcher.	Catcher pushes ball.	Ball pushes catcher.
5. Book rests on table.	Book pushes down on table.	Table pushes up on book.
6. Book sliding across table slows to a stop.	Table drags book.	Book drags table.
7. Sailboat sails forward.	Air pushes sail forward.	Sail pushes air backward.
8. Rocket accelerates in space.	Exhaust gases push rocket forward.	Rocket pushes exhaust gases backward.
9. Bowling ball hits pin.	Bowling ball pushes pin forward.	Pin pushes bowling ball backward.

In which cases are the forces in the first column greater than those in the second column? Explain.

Never.