

Newton's 3<sup>rd</sup> Law of Motion:

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When a small lab cart hits a wall, the forces acting on the cart and wall are \_\_\_\_\_, but the \_\_\_\_\_ of the cart and wall are different. Because the \_\_\_\_\_ of the wall is much greater, the wall's acceleration will be much \_\_\_\_\_.

Action-Reaction forces do \_\_\_\_\_ cancel out.  
Action-Reaction forces involve \_\_\_\_\_ objects and \_\_\_\_\_ forces.

action -  
reaction -

The car's tires push back on the road and the road pushes the car \_\_\_\_\_.  
A swimmer pushes water backwards and the water \_\_\_\_\_.

Action (A acts on B)	Reaction (B acts on A)
Kangaroo pushes down on ground.	
Ball hits head.	
Windshield hits bug with force of 10 N.	
Dentist pulls up on tooth.	
Helicopter blades push air down.	

Challenge - Why is this not an action-reaction pair?

Name the 2 action-reaction pairs.



horse and cart problem (on back)