

Week 4 Net Force

Pilot the Rocket

A. Fire the rear engine once - which way and how many firings does it take to stop?	
B. Reset the game and fire the rear engine twice - which way and how many firings does it take to stop?	
C. You wish to go right to the middle of the screen, stop, come back to your start position and stop. What is the least number of engine firings that will do it?	
D. Is your answer different if you instead go all the way to the other side of the screen, stop, come back and stop again?	

Questions

1. If you are moving to the right...
 - And you fire your rockets to the left:
 - Speed up Slow down Stay constant
 - And you fire your rockets to the right:
 - Speed up Slow down Stay constant
 - And you don't fire your rockets
 - Speed up Slow down Stay constant
2. When NASA sent rockets to the Moon, when do you think they used the LEAST fuel? The MOST fuel?
 - a) Launch (5 minutes)
 - b) Getting to the Moon (3 days)
 - c) Landing on the Moon (20 minutes)

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3. a) Is there friction or air resistance in space?

b) How does that make things easier for rockets in space?

c) How does that make things more difficult for rockets in space?

4. (a) If you run out of fuel when you are stopped, what kind of motion will you have?

(b) If you run out of fuel when you are moving, what kind of motion will you have?

5. In general, if you are moving one way and you want to slow down, which way do you need a force?

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