

Grade 5 Science  
Week of February 16 – February 19

Measuring Forces



Physics - Forces: <https://youtu.be/sqdHsTwEp58>



Measuring Forces: [https://youtu.be/FbVP9\\_ZCi\\_A](https://youtu.be/FbVP9_ZCi_A)

## Net Force

There is almost always more than one force acting on an object at any given time. For example, if you **push a ball down a hill**:

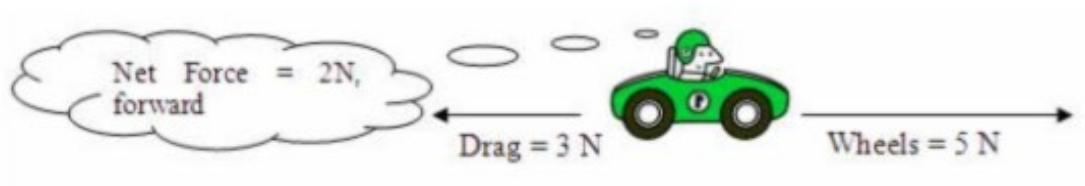
- **You** applied a push force to the ball
- **Gravity** is pulling the ball down the hill
- The grass is applying **friction** which is slowing it down
- Air resistance is also applying **friction** and slowing the ball down.



That's a lot of forces at play! If we took all of these forces into account and calculated **the total force being applied to the ball**, we would be calculating the **Net Force**.



Physics – Forces: <https://youtu.be/z506qGc4RIQ>

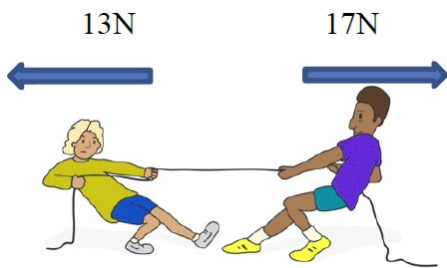


1. What is Net Force?

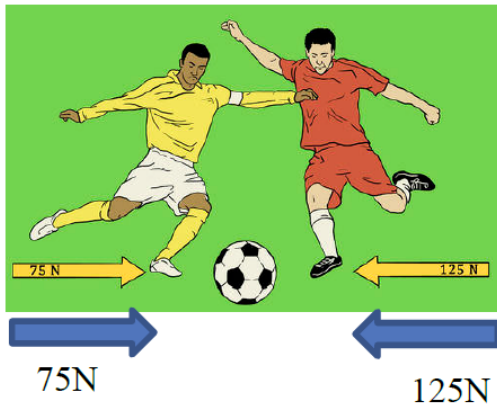
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2. Fill in the blank: There will only be a net force for \_\_\_\_\_.

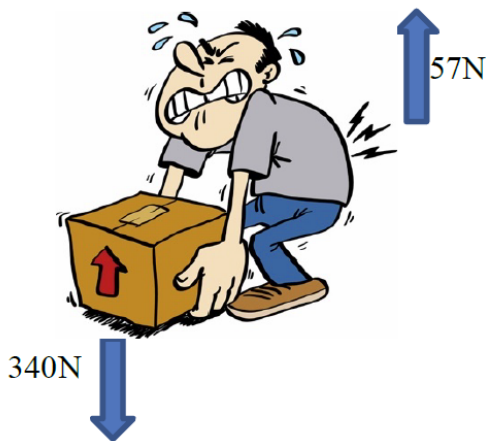
3. Calculate the Net Force for the following scenarios below. Show **all** of your work.



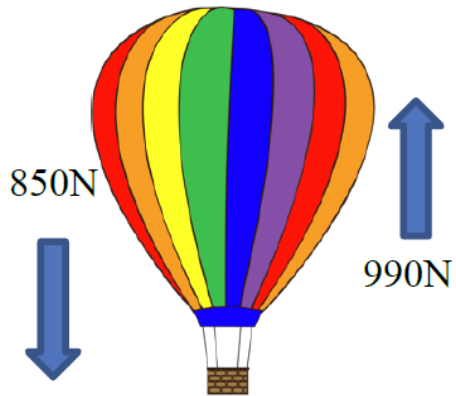
Net Force:



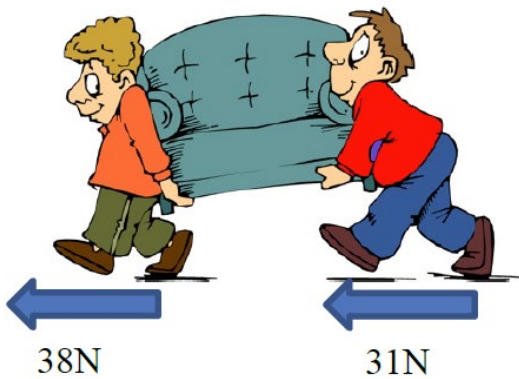
Net Force:



Net Force:



Net Force:

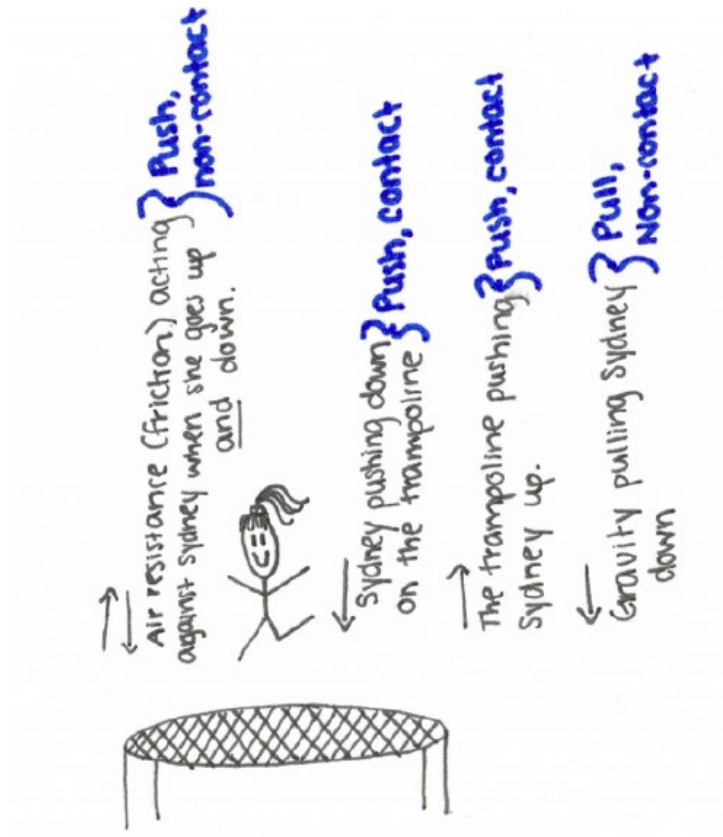


Net Force:

4. In the following questions, you will be given a scenario.

- **Sketch** what is being described, then indicate all the forces that could possibly be acting on the object; include their direction.
- Indicate if each force is **contact** or **non-contact**
- Indicate if each force is a **push** or a **pull**

a. EXAMPLE: Sydney is jumping on her trampoline.



b. Max, the skydiving dog, is parachuting out of a plane.

c. You are paddling your canoe on a lake.