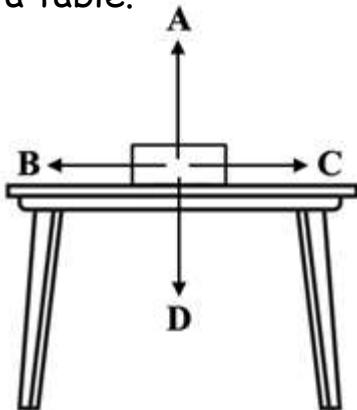


Lesson B: Force Diagrams (6.2)

Name : _____

Date : _____

1. A box is placed on a table.



Which arrow shows the direction of the gravity acting on the box?

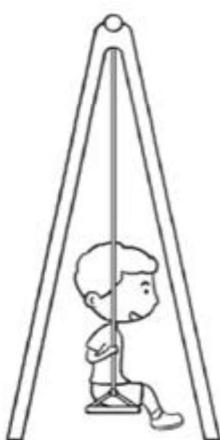
Circle the correct letter.

2. The diagram shows a boy sitting on a swing.

The swing does not move.

On the diagram, draw **two** arrows to show the forces acting on the boy.

Label the arrows.



3. Some students are discussing what happens to a toy car when there are unbalanced forces acting on it.



Cass

It can change in direction.



Damian



Nish

It can change speed.

It will move at the same speed, in the same direction.

One of the students is incorrect.

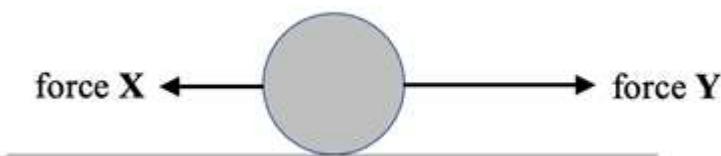
Circle the name of the student who is incorrect.

Cass

Damian

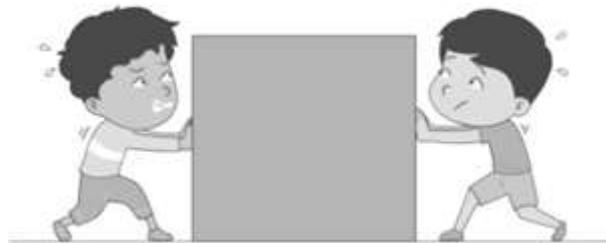
Nish

4. Two forces, X and Y, are acting on a ball on the floor.



What will happen to the movement of the ball? Give a reason.

5. Two boys are pushing a stationary box in opposite directions.



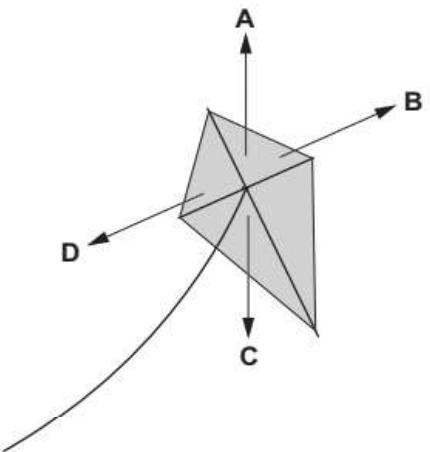
The box remains stationary. Explain why.

6. Samir is flying a kite.

There is strong wind blowing.

The picture shows forces acting on the kite.

a. Which letter shows the gravitational force on the kite? _____



b. Which letter shows the force exerted by Samir? _____

c. Which letter shows the force exerted by the wind? _____

d. Which two forces are balanced? Circle the correct answer.

A and C

D and C

C and B

B and D

e. The strength of the wind increases.

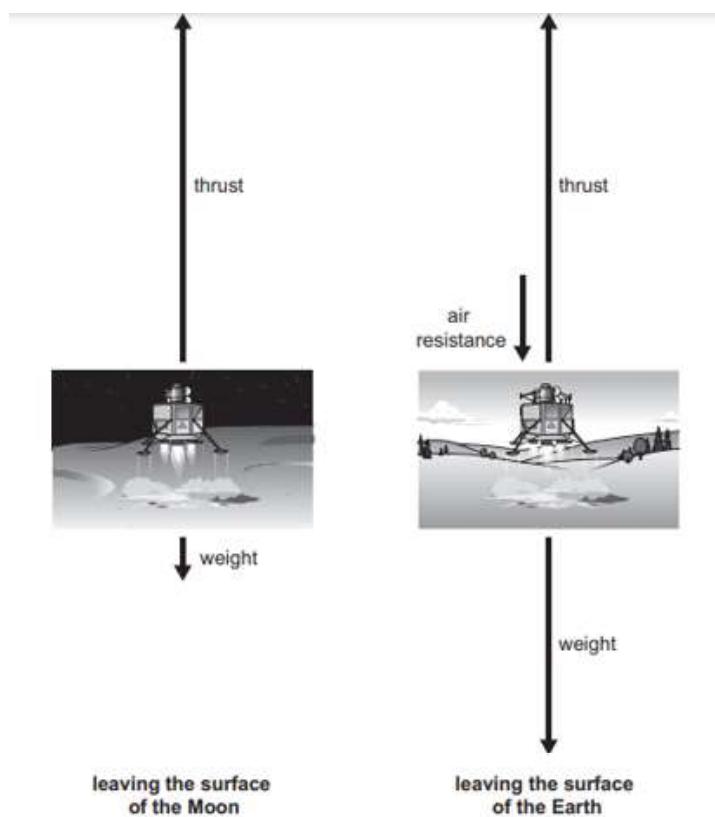
The kite stays in the same place.

What happens to the pulling force exerted by Samir?

7. Look at these two force diagrams for a spacecraft.

One diagram shows the spacecraft leaving the surface of the Moon.

The other diagram shows the spacecraft leaving the surface of the Earth.



a. In both diagrams the mass of the aircraft is the same.

What is the name of the unit of mass?

b. The weight of the aircraft on Earth is different from the weight of the aircraft on the moon. Explain why.

c. What is the unit of weight?

d. Explain why the aircraft leaving the Moon moves upward faster than when it leaves Earth. (Refer to the diagram.)

Reason 1: _____

Reason 2: _____

8. Write the name of force acting on the object.

