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 **INTRODUCTION TO**  Name:\_\_\_\_\_\_\_\_\_\_\_
 Date: \_\_\_\_\_\_\_\_\_\_\_
 Period/team: \_\_\_\_\_\_\_\_\_\_\_

A **FORCE** is a: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in a particular \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

 *Forces affect how objects move.*

 Forces can affect motion in the following ways:

 BIG i)

 SCIENCE ii)

 IDEA! iii)

 iv)

 v)

 vi)

\* Since forces cause changes in speed or direction of an object, we can say that

forces change \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, so…… FORCES cause \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ !

More than one force can act on an object at one time. What happens to the object when forces act depends on 2 things:

 1)

 2)

When more than one force acts on an object, the forces \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

to form a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Forces may \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

If the effects of the forces **cancel each other out**, and do not cause an object to

move, the forces are said to be \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

If the forces **don’t cancel each other out** – 1 force is stronger than the others –

the forces are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and will cause a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**FORCE**


**MEASURING FORCE**The strength of a force is measured in \_\_\_\_\_\_\_\_\_\_\_\_\_ .

The symbol is \_\_\_\_\_\_.

We can use a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to measure
forces in our science experiments.

**COMBINING FORCES**Two forces \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ can \_\_\_\_\_ together to produce a LARGER net force.

 \_\_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_

Two forces \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ can \_\_\_\_\_\_\_\_\_\_\_ to produce a SMALLER net force in the direction of the larger force.

 \_\_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_

Two forces may \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and produce NO NET FORCE.

 \_\_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_

Some examples of forces are:

= 0



Circle the best answer:

1. The forces shown above are PUSHING / PULLING forces.
2. The forces shown above are WORKING TOGETHER / OPPOSITE FORCES.
3. The forces shown above are EQUAL / NOT EQUAL.
4. The forces DO / DO NOT balance each other.
5. The net force is 1000 N TO THE RIGHT / 1000 N TO THE LEFT / ZERO.
6. There IS / IS NO motion.



Circle the best answer:

1. The forces shown are PUSHING / PULLING forces.
2. The forces shown are WORKING TOGETHER / OPPOSITE FORCES.
3. The forces shown above are EQUAL / NOT EQUAL.
4. The forces DO / DO NOT balance each other.
5. The stronger force is pulling RIGHT / LEFT.
6. Motion is the to the RIGHT / LEFT.

1. Two movers are trying to move a heavy box. One mover pushes to the right with a force of 150 N. The other mover pushes to the left with a force of 200 N.

 a) Draw & label the forces on the diagram.

 b) What is the net force? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 c) Will the box move? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 If yes, in what direction? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 If no, why not? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Two movers are trying to move a heavy chair. One mover PULLS to the left with a force of 200 N. The other mover PUSHES to the left with a force of 200 N.

 a) Draw & label the forces on the diagram.

 b) What is the net force? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 c) Will the chair move? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 If yes, in what direction? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 If no, why not? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Four children are fighting over the same toy. Mike is pulling North with a 50 N force, Justin is pulling East with a 40 N force, Chantal is pulling South with a 50 N force, and Tykera is pulling West a 30 N force.

 a) Draw & label the forces on the diagram.

 b) Is there a net force on the toy? \_\_\_\_\_\_\_\_\_\_\_\_

 c) In which direction will the toy move? \_\_\_\_\_\_\_\_

 d) Who gets the toy? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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