Science 8 **Forces**  Name:\_\_\_\_\_\_\_\_\_\_

Date:\_\_\_\_\_\_\_\_\_\_\_

Read pages 276 to 285 in order to answer the following questions.

1) Define a **force**

2) List three effects a force can have on an object. **A FORCE CAN**:

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3) What is a **contact force**?

4) List three types of contact forces and provide examples of each

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* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

5) What is an **action-at-a-distance force**?

6) List three types of action-at-a-distance forces and provide examples of each

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7) For each of the following forces, identify if they are an action-at-a-distance

Force or a contact force. Determine the type of force that is acting also

a) A meteor travelling through space moves faster and faster as it approaches

earth

b) A bungee cord pulls a jumper back up toward the platform from which he

jumped

c) Your hands become warmer as you vigorously rub them together

d) When combing your hair, you notice that hairs move upward from your head to

the comb

8) a. What are the units used to measure force?

b. What type of instrument is used to measure force?

9) What are balanced forces?

10) What happens to an object when the forces on it are balanced?

11) What are unbalanced forces?

12) What happens to an object when the forces on it are unbalanced

**Mass and the force of gravity**

**What is the definition of mass?**

What are the units used to measure mass?

What instrument measures mass?

For force, the unit we use is the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. We can measure force using a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

Are gravity and mass the same thing?

In which direction does the force of gravity act on the following object?

Ground

Crate

The earth is pulling down on you. Any objects large enough like planets and stars have a gravitational force that we can feel

Since we are closer to the earth we feel its gravitational force the most

* The earth pulls objects towards its centre