

(Frameworks Code)

Part A: Answer the following questions in the space provided:

1. What are the two factors that affect the force of friction between two surfaces? texture of surfaces & Amount of force holding the objects together.
2. What is one way that you could reduce the friction between two surfaces? Sand them or lubrication
3. The acceleration due to gravity of all objects in free fall is the same. Why, then, do some objects fall through the air at a different rate? different amounts of Air resistance
4. How does mass differ from weight? MASS is amount of matter, weight is measure ^{of} Gravity
5. What is the law of universal gravitation? States that the force of Gravity acts Between all objects in the universe
6. What are two things upon which amount of gravitational force between two objects depend? mass of objects & Distance Between objects
7. Why does Earth exert a stronger gravitational force than the moon? Earth has more MASS
8. If an object weighs 40 N on Earth would it weigh more than 40 N on the moon? Explain your answer. No, it would weigh less because the moon has less (1/6) the Earth's gravity
9. If an object has a mass of 26 g on Earth, would its mass be less than 26 g on the moon? Explain your answer. No, Since MASS is the amount of material packed into an object it would not change

Part B: Match each term with its definition by writing the letter of the correct definition on the line for the term

- | | |
|--------------------------------|---|
| <u>C</u> 10. friction | a. the force that accelerates objects towards Earth |
| <u>h</u> 11. rolling friction | b. the kind of friction that exists between oil and a door hinge |
| <u>F</u> 12. sliding friction | c. the general term for the force that one surface exerts on another when they rub against each other |
| <u>B</u> 13. fluid friction | d. the kind of friction that slows a falling object |
| <u>E</u> 14. free fall | e. the state that exists when the only force acting on an object is gravity |
| <u>A</u> 15. gravity | f. the kind of friction that results when you rub sandpaper against wood |
| <u>I</u> 16. terminal velocity | g. a measure of the force of gravity on an object |
| <u>D</u> 17. air resistance | h. the kind of friction that results when a wheel turns on a surface |
| <u>G</u> 18. weight | i. reached when the forces of gravity and air resistance are balanced on a falling object |