

Worksheet: Friction & Gravity

(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? _____

2. What is one way that you could reduce the friction between two surfaces? _____

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? _____
4. How does mass differ from weight? _____
5. What is the law of universal gravitation? _____
6. What are two things upon which amount of gravitational force between two objects depend? _____

7. Why does Earth exert a stronger gravitational force than the moon? _____
8. If an object weighs 40 N on Earth would it weigh more than 40 N on the moon? Explain your answer. _____

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. _____

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

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