

Name:

Date:

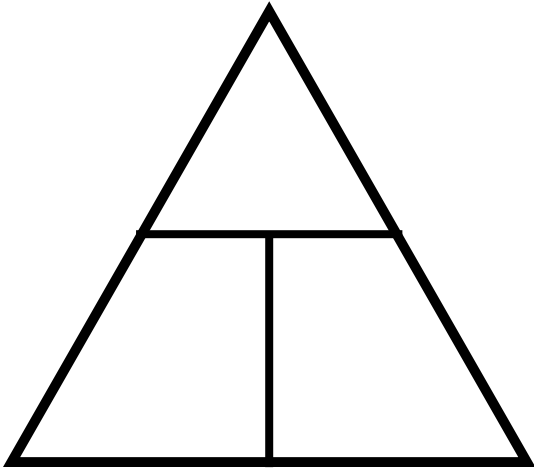
CALCULATING

WEIGHT, MASS OR GRAVITY

Equation:

Mass:

Weight:



W

m

g

Key Information

a. A box has a mass of 15 kg. What is the weight of the box on the surface of the Earth?

b. On Planet Kennium, an object weighs 300 N. The gravitational field strength on Kennium is 5.2 N/kg. What is the mass of the object on Planet Kennium?

c. An object with a mass of 25 kg weighs 375 N on Planet Greaney. What is the gravitational field strength on Planet Greaney?

Name:

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Period:

W=MG CALCULATION PRACTICE

Directions: For each problem below, identify the variable you will be solving for and write the formula, identify the unknowns, plug numbers into the equation and solve for the answer.

Problem	What are you calculating? Circle the W, m, or g and write the formula.	Identify the known variables.	Plug known variables into equation. Solve.	Answer, include units.
A book has a weight of 30 N. If the gravity on the planet is 7 N/kg, what is the mass of the book?	W m g			
An object with a mass of 35 kg is placed on the surface of Earth. What is its weight?	W m g			
A person weighs 700 Newtons on a planet with a gravity of 15 N/kg. What is their mass?	W m g			
An astronaut's mass on a different planet is 60 kg, and their weight is 180 N. Calculate the gravity on this planet.	W m g			
A fruit basket has a mass of 1200 g. The gravity on this planet is 10 N/kg. Calculate the weight of the fruit basket.	W m g			

Problem	What are you calculating? Circle the W, m, or g and write the formula.	Identify the known variables.	Plug known variables into equation. Solve.	Answer, include units.
A toy has a mass of 0.25 kilograms on Earth. What is its weight in newtons?	W m g			
A box has a mass of 3500 g on a planet with a gravity of 8.5 N/kg. What is the weight of the box in Newtons?	W m g			
A package has a weight of 1200 N on a different planet, and its mass is 240 kg. Calculate the gravity on that planet.	W m g			
An object on Earth weighs 500 N. Calculate the weight of the same object on Planet Kennium, where the gravity is 5.2 N/kg.				
A satellite has a weight of 120,000 N on Earth. Determine the gravity on Planet Hassan, where the satellite's weight is 180,000 N.				