

NAME: _____ DATE: _____

FORCES, PRESSURE AND GASES

- Complete the following sentences: A force may be a _____, _____ or _____.
- The two categories of forces include _____ forces where objects must touch and _____ forces where objects do not have to touch.
- Number the definitions to match them to the words.

1	Contact
2	Non-contact
3	Mass
4	Weight
5	Friction
6	Newton
7	Kilogram

	The unit of mass.
	The force between objects that are not touching.
	A force which slows down motion.
	The amount of matter a substance contains.
	The unit of force.
	A force between objects that are touching.
	A force due to gravitational pull.

- Find the words in the puzzle below.



FORCES WORDSEARCH

U N B A L A N C E D V X A
 T Z M B Z L N B Y R Z I Z
 N B Y U D Y T I V A R G R
 A Y F R P R N V D R Y E R
 T B R B G T X X E Z T Z T
 L Y I T L D H S W E W H Y
 U X C N L T I R M L R B Y
 S J T T O S H N U U Y S B
 E N I J T T O G S S S D J
 R R O A D T W T I A T J B
 D W N D W X P E M E J L N
 N C B E R N L R N T W L G
 E V N J Q X M W B W Z D D

AIR RESISTANCE

FRICTION

GRAVITY

MASS

NEWTON

WEIGHT

RESULTANT

THRUST

UNBALANCED

UPTHRUST

METER

5. Put these words in the correct boxes to show the equation for calculating weight.

MASS	=	WEIGHT	X	GRAVITY
	=		X	

6. Calculate the weight (in Newtons) of these aliens on their home planet. Type the **answer only** in the space.

 $m = 20\text{kg}$ $g = 34 \text{ m/s}^2$ _____ N A	 $m = 11\text{kg}$ $g = 3 \text{ m/s}^2$ _____ N B	 $m = 45\text{kg}$ $g = 9 \text{ m/s}^2$ _____ N C	 $m = 89 \text{ kg}$ $g = 12 \text{ m/s}^2$ _____ N D
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6b. Which alien lives on a planet that has gravity closest to that on Earth? Alien _____

7. Calculate the resultant forces below.

			
RESULTANT FORCE / N			
DIRECTION			

8. Calculate the pressure using the following equation: **Pressure = Force / Area**. Write the answer only in the space.

a. Force is 560 N and the area is 28 m/s _____ Pascals

b. Force 7200 N and area is 8 m/s _____ Pascals

c. Force is 8525 N and 5 m/s _____ Pascals