

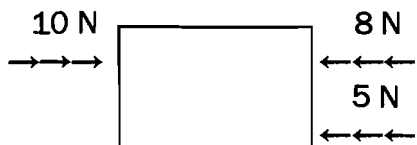
Force and Motion quiz

Part I: Directions: Choose the best answer and write it on the line

- ____ 1.) A Force is a _____.
a) mass and weight b) push or pull
c) change in acceleration d) everyday machine
- ____ 2.) Force is measured in the unit _____.
a) Liters b) Meters
c) Newtons d) Pounds
- ____ 3.) To move a heavy object, you need to _____.
a) exert (apply) a small force b) use the Jedi mind trick
c) exert (apply) a large force d) bang on the table
- ____ 4.) For a force to take place there must be movement.
a) true b) false
- ____ 5.) Which of the following changes when an unbalanced force acts on an object?
a) mass b) gravity
c) motion d) weight
- ____ 6.) If a block is sitting on a desk not moving, the forces acting on the block are _____.
a) friction b) changing
c) unbalanced d) balanced
- ____ 7.) When you are lifting a brick, the forces acting upon it are _____.
a) friction b) red, white, and blue
c) unbalanced d) balanced
- ____ 8.) If the forces on an object are balanced, there is no _____.
a) gravity b) change in Newtons
c) change in motion d) Both B and C

Part II: Directions: Show ALL calculations (Do the math) below and choose the best answer.

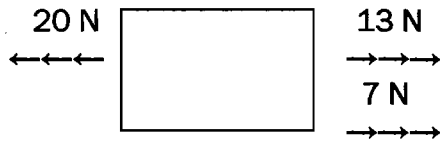
- ____ 9.) Look at the figure below. Two students are pushing on the right side of a box and one student is pushing on the left. The diagram below shows the forces they exert (apply). Which way will the box move?



- a) left b) will not move
c) down d) right

What is the resultant force (Show your math)? _____

___ 10.) Look at the figure below. Two students are pulling on the right side of a box and one student is pulling on the left. The diagram below shows the forces they exert (apply). Which way will the box move?



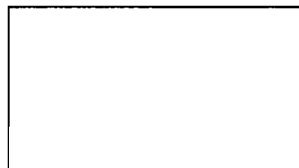
- a) left
- b) will not move
- c) down
- d) right

What is the resultant force (Show your math)? _____

11.) Using force arrows and any number of Newtons, show a **balanced** force below:
(Hint: Think about the Tug-of-War activity) Show the resultant force and any math!



12.) Using force arrows and any number of Newtons, show an **unbalanced** force below:
Show the resultant force and any math!



13.) The below figure is an object sitting on a table. Using force arrows and any number of Newtons, show the force acting on an object at rest. Please show your math to help explain.

