

# Warm - Ups

Week 21

- **Vocabulary: MON**
  - 1<sup>st</sup> law of motion – (Inertia) An object at rest stays at rest and an object in motion stays in motion unless acted on by an outside force
  - 2<sup>nd</sup> law of motion – Force = Mass x Acceleration; the more mass or acceleration will make force greater
- **What is force?**
  - A motion
  - Both a push or a pull
  - Only a push
  - Only a pull
- **What is Net Force?**
  - When two or more forces act on an object at the same time
  - two unequal forces are applied to an object in opposite directions and the object does move.
  - A push or a pull
  - When two equal forces are applied to an object in opposite directions, the object does not move

- **Vocabulary: Tues**

3<sup>rd</sup> law of motion – For every action, there is an equal and opposite reaction

Acceleration –  $\text{Acceleration} = \text{Force} / \text{Mass}$ ; any change in speed or direction

- **What is balanced force?**

- two unequal forces are applied to an object in opposite directions and the object does move.
- The amount of only one force on an object
- A push or a pull
- When two equal forces are applied to an object in opposite directions, the object does not move

- **What is unbalanced force?**

- two unequal forces are applied to an object in opposite directions and the object does move.
- The amount of only one force on an object
- A push or a pull
- When two equal forces are applied to an object in opposite directions, the object does not move

- **Vocabulary: Thurs**

Average speed – Average Speed = Distance / Time

Balanced forces – two separate forces on an object in opposite directions at the same time

- **Force=**

- Mass x Acceleration

- Mass / Acceleration

- Acceleration<sup>2</sup> x Mass

- Acceleration x Mass<sup>2</sup>

- **What is the net force on a motorcycle with a mass of 500kg if its acceleration is 46.0 m/s<sup>2</sup>?**

- 23,000 N

- 10.87 N

- 1,058,000 N

- 11,500,000 N

1. What is the formula for speed?
  - A.  $S=dt$
  - B.  $S=d/t$
  - C.  $S=t/d$
  - D. There is no equation for speed
2. Inertia is \_\_\_\_\_
  - A. The unit of force
  - B. An object's tendency to change
  - C. The rate that something changes directions
  - D. An object's tendency to resist change
3. What law? For every action there is an equal and opposite reaction:
  - A. 1<sup>st</sup>
  - B. 2<sup>nd</sup>
  - C. 3<sup>rd</sup>
  - D. 4<sup>th</sup>
4.  $F=mA$  is what law?
  - A. 1<sup>st</sup>
  - B. 2<sup>nd</sup>
  - C. 3<sup>rd</sup>
  - D. 4<sup>th</sup>
5. What is the equation for work?
  - A.  $W=fd$
  - B.  $W=f/d$
  - C.  $W=d/f$
  - D. There is no equation for work