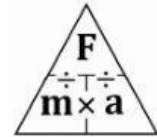


Newton's 2 Law Calculations



No space between answer and unit If answer is squared, use a regular 2.

1. With **what force** will a car hit a telephone pole if the car has a mass of 4,000 kg and an acceleration of 2 m/s^2 ?
 - a. Mass =
 - b. Acceleration =
 - c. Answer with unit =
2. **What force** would be needed to make a 5 kg skateboard accelerate down a hill with an acceleration of 3 m/s^2 ?
 - a. Mass =
 - b. Acceleration =
 - c. Answer with unit =
3. **What would be the mass** of a vehicle if it is accelerating at a rate of 5 m/s^2 and hits a parked car with a force of 15,000N?
 - a. Force =
 - b. Acceleration =
 - c. Answer with unit =
4. **What is the acceleration** of a football with a mass of 0.40 kg and hits the receiver's hands with a force of 25 N?
 - a. Force =
 - b. Mass =
 - c. Answer with unit =
5. How much does a refrigerator **weigh** if it has a mass of 131kg? (Hint: you need to recall the acceleration due to gravity)
 - a. Mass =
 - b. Acceleration =
 - c. Answer with unit =
6. **What would be the mass** of an asteroid falling from the sky if it hits the ground with a force of 147N? (hint: think about the acceleration all falling objects have)
 - a. Force =
 - b. Acceleration =
 - c. Answer with unit =
7. **What is the acceleration** of the stack of books below if the total mass of the books is 1.5 kg? (Hint: you will need to calculate the NET Force)
 - a. Force =
 - b. Mass =
 - c. Answer with unit =

