

$$F_{\text{net}} = m \cdot a \quad \text{or} \quad a = \frac{F_{\text{net}}}{m}$$

Force Problems

Name: _____

Directions: show all work and include the proper units with your answer.

1. What is the force on a 500 kg mass which has an acceleration of 5 m/s^2 ?
2. A force of 20 N acts upon a mass, accelerating it 4 m/s^2 . What is the mass?
3. What is the value of the acceleration due to gravity? _____
4. What is the weight in Newtons of a mass of 100 kg?
5. A ball starting from rest is dropped towards the Earth. What is its velocity after 2 seconds?

Two toy cars are in a race. Toy car A has a mass of 5 kg is pushed with a force of 10N. Toy car B has a mass of 2 kg and is also pushed with a force of 10N. Which car will win the race? Explain