

Answer on Question 65805, Physics, Other

Question:

What would be the acceleration of a 5 kg object that was being acted upon by an unbalanced force of 20 N ?

Solution:

By the definition of the Newton's Second Law of Motion we have:

$$F = ma,$$

here, F is an unbalanced force acting on the object, m is the mass of the object, a is the acceleration of the object.

Then, from this formula we can find the acceleration of the object:

$$a = \frac{F}{m} = \frac{20\text{ N}}{5\text{ kg}} = 4 \frac{\text{m}}{\text{s}^2}.$$

Answer:

$$a = 4 \frac{\text{m}}{\text{s}^2}.$$

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