Answer on Question 64762, Physics, Other

Question:

How much force must a $20000\ kg$ rocket develop to accelerate $100\ cm/s^2$?

Solution:

We can find how much force must a $20000\,kg$ rocket develop to accelerate $100\ cm/s^2$ from the Newton's Second Law of Motion ($100\ cm/s^2 = 1\ m/s^2$):

$$F = ma = 20000\ kg \cdot 1\ \frac{m}{s^2} = 20000\ N.$$

Answer:

$F = 20000\ N.$