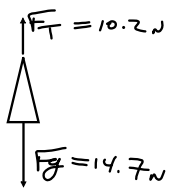


A small rocket weighs 14.7 N.

a) Find its mass.

b) What is the acceleration if the engine exerts a thrust force of 10.2 N.



$F_g = mg$ a) $m = \frac{F_g}{g} = \frac{14.7}{9.81} = 1.504$

b) $F_n = F_T - F_g = 10.2 - 14.7 = -4.5\text{N}$

$F_n = m a$
 $a = \frac{F_n}{m} = \frac{-4.5\text{N}}{1.504} = -3.0\text{m/s}^2$
 accel down.

Oct 24-8:49 AM