**Solution 1.17**

Problem 1-16 is reconsidered. The entire software solution is to be printed out, including the numerical results with proper units.

***Analysis*** The problem is solved using EES, and the solution is given below.

"The weight of the rock is"

W=m\*g

m=3 [kg]

g=9.79 [m/s2]

"The force balance on the rock yields the net force acting on the rock as"

F\_up=200 [N]

F\_net = F\_up - F\_down

F\_down=W

"The acceleration of the rock is determined from Newton's second law."

F\_net=m\*a

"To Run the program, press F2 or select Solve from the Calculate menu."

**SOLUTION**

a=56.88 [m/s^2]

F\_down=29.37 [N]

F\_net=170.6 [N]

F\_up=200 [N]

g=9.79 [m/s2]

m=3 [kg]

W=29.37 [N]

|  |  |
| --- | --- |
| m [kg] | a [m/s2] |
| 1  2  3  4  5  6  7  8  9  10 | 190.2  90.21  56.88  40.21  30.21  23.54  18.78  15.21  12.43  10.21 |