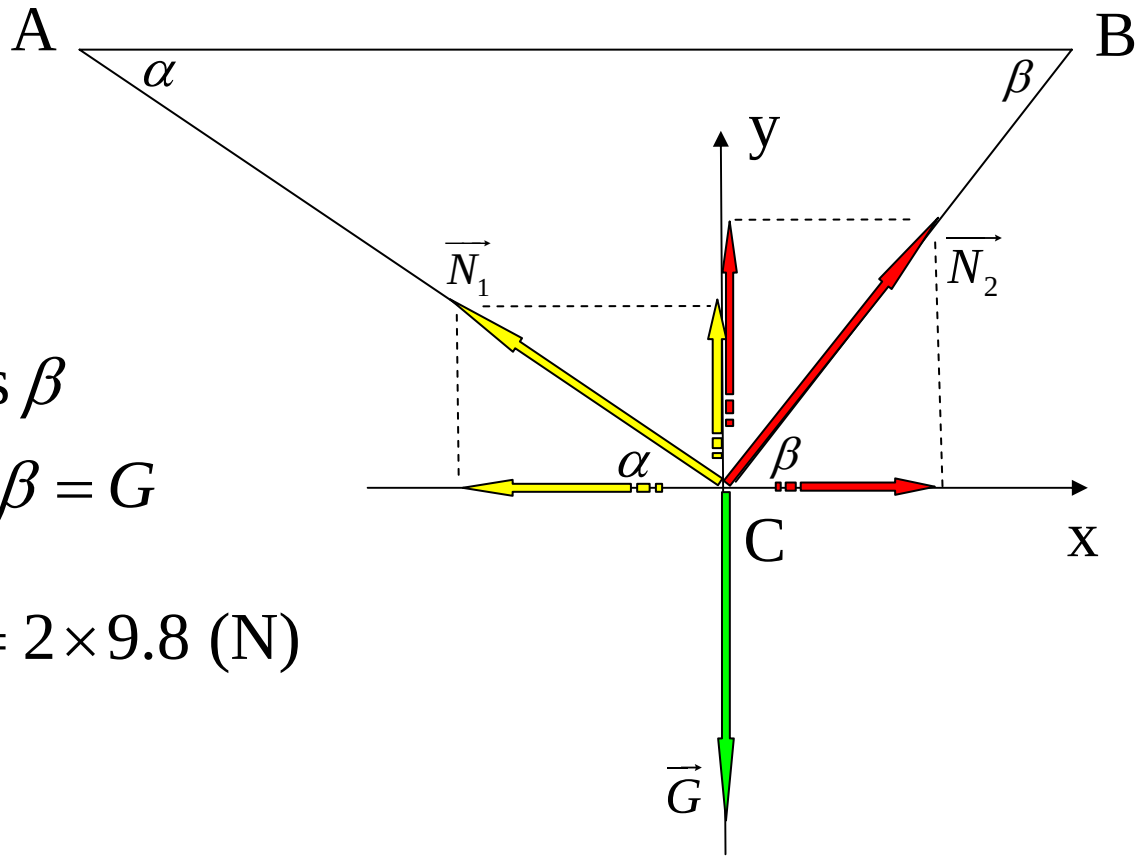
Readings of Spring Scales

Solution:

The correct answer is c.)

When the pulse arrives at the fixed end, it exerts an upward force on the end. And the fixed end exists a downward reaction force on rods. This also can be explained by using the principle of superposition. (*Hint: imagine an another downward pulse on an imaginary spine connected to the original spine such that two pulses meet with the common end fixed*.)

Readings of Spring Scales



$$\begin{cases} N_1 \cos\alpha = N_2 \cos\beta \\ N_1 \sin\alpha + N_2 \sin\beta = G \end{cases}$$

$$\alpha = 30°, \beta = 55°, G = 2 \times 9.8 \text{ (N)}$$

$$\begin{cases} N_1 \doteq 11.3 \text{ (N)} \\ N_2 \doteq 17.2 \text{ (N)} \end{cases}$$