**Answer on Question 50120, Physics, Mechanics | Kinematics | Dynamics**

**Question:**

What is the spring constant of a spring which tension force is 50N when displaced 5cm?

**Solution:**

We can find the spring constant from the Hooke's law:

$$F = kx,$$

where $F$ is the force acting on the spring, $k$ is the spring constant, $x$ is the elongation of the spring.

Then, the spring constant will be:

$$k = \frac{F}{x} = \frac{50N}{0.05m} = 1000\frac{N}{m}.$$

**Answer:**

$k = 1000\frac{N}{m}.$