Question #82688, Physics / Other

The following readings were obtained in the experiment

S(cm):. 2.5 5.0 10.0 20.0 30.0 40.0
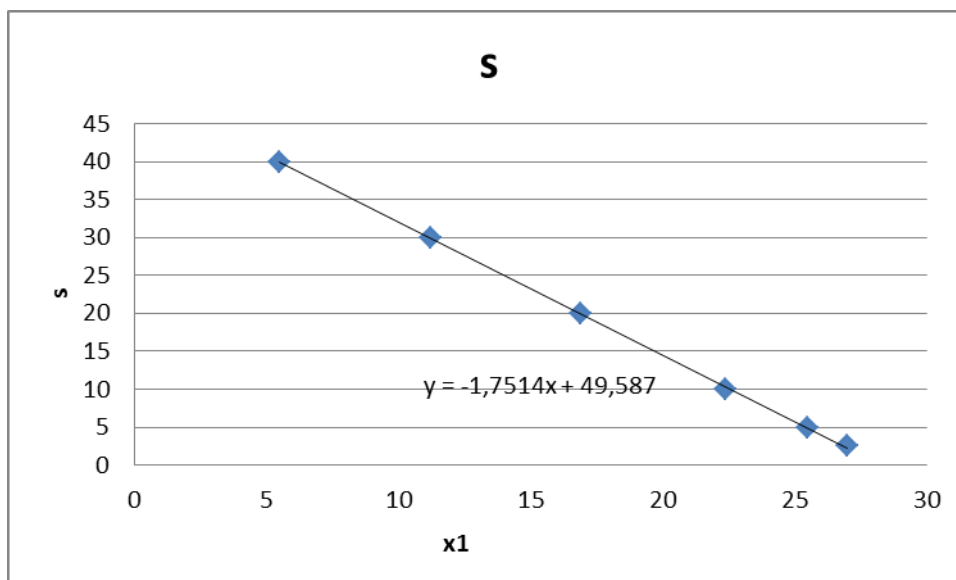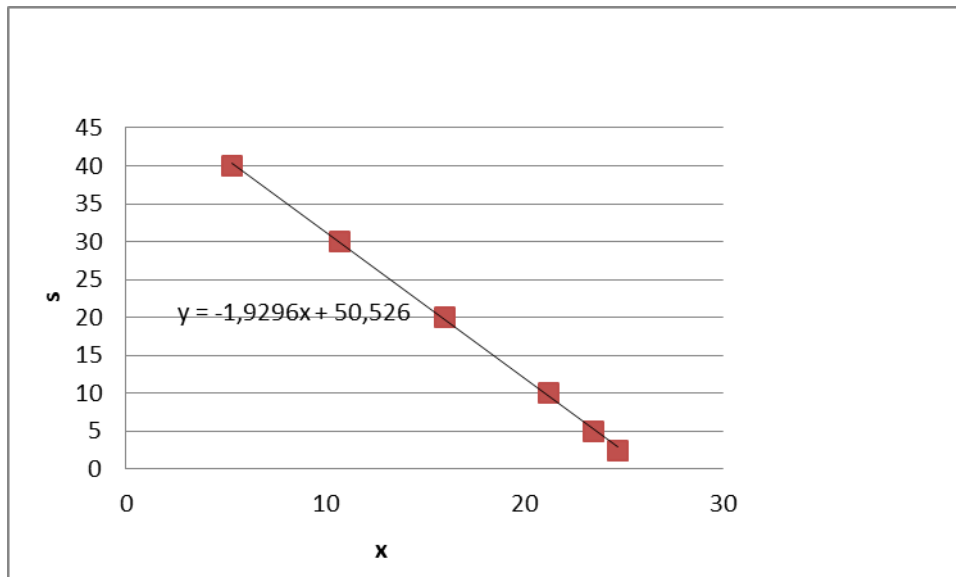
X(cm): 24.7 23.5 21.2 16.0 10.7 5.3

X1(cm):27.0 25.5 22.4 16.9 11.2 5.5

Plot a graph of s against x and, s against x1, using d same Axes.

Determine the following

1. The point of intersection of the two graphs

2. The values of s when x=0 and X1=0

Solution

1. The point of intersection of the two graphs:

$$x = 5.269 \; cm, s = 40.358 \; cm.$$

2. The values of s when x=0 and X1=0:

$$s(x = 0) = 50.256 \; cm.$$

$$s(x_1 = 0) = 49.587 \; cm.$$

Answer provided by https://www.AssignmentExpert.com