

4 A student carried out an experiment to determine the focal length of a converging lens.

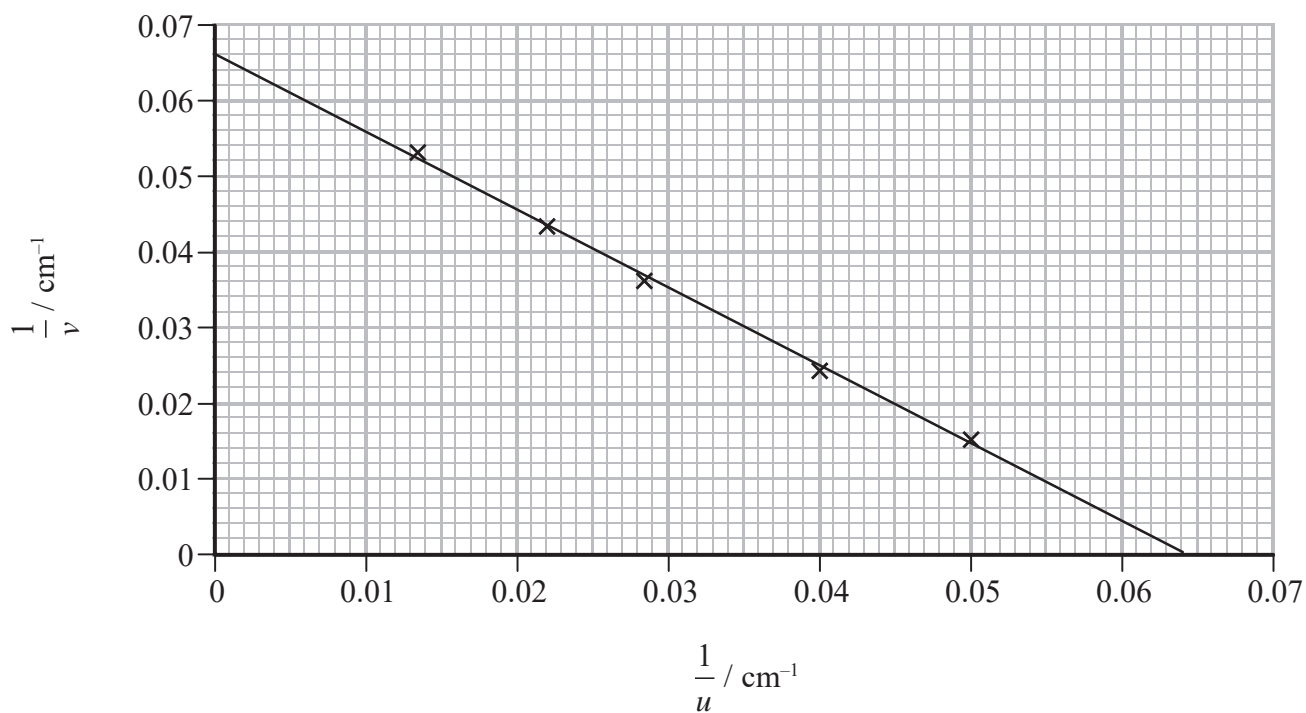
He placed the lens a distance u from an illuminated object. He placed a screen on the other side of the lens and moved the screen until a sharp image of the object was produced. He measured the corresponding image distance v .

The student repeated the procedure for four more values of u .

In his lab report he wrote:

"I made an initial determination of the focal length of the lens and concluded that it was about 15 cm. When I plotted a graph it confirmed my initial determination of the lens focal length."

The student's graph is shown.



Comment on whether the student's data is consistent with his initial determination of the focal length of the lens.

(5)