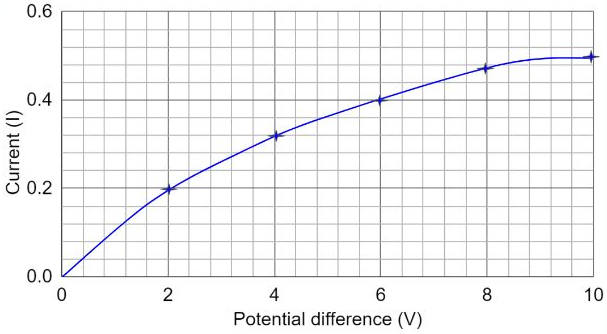

A student investigated the relationship between the current that passes through a filament lamp and the potential difference across it.

The results are displayed in the graph to the left.

Use the information on the graph to determine the resistance of the filament lamp when the potential difference across it is 4 V.
(4 marks)

Resistance =

13.3 ✖

Nearly - but it looks like you have made a mistake in step 1. The current is 0.32 A when potential difference = 4 V (it is 3/5 of the way between 0.2 and 0.4 - so 3.2 A).
You would have got marks for the rest of your answer as long as you showed your working clearly.
1) Read the current when potential difference = 4 V
= 0.32 A
2) Write out equation linking data needed (resistance) and known data (potential difference & current)
Potential difference = current x resistance
V = IR
2) Enter known data into equation:
4 = 0.32 x R
3) Divide both sides by 0.32 to get R on its own
4 ÷ 0.32 = R
R = 12.5