

- (c) The table below shows the amount of radioactivity in different parts of the plant after 24 hours.

Part of plant	Amount of radioactivity in counts per minute
shoot tip	1 123
leaf exposed to radioactive carbon dioxide	11 325
other leaves	234
stem	819
seeds	9 055
roots	842

- (i) What evidence in the table shows that carbohydrate is transported both up and down the plant?

..... (1)

- (ii) Suggest why the “other leaves” contain only small amounts of radioactive carbohydrate.

..... (1)

- (iii) Ignoring the leaf that was exposed, calculate how much more radioactive carbohydrate was found in the seeds than in all the other plant parts added together.

..... counts per minute (1)

- (iv) Explain why a supply of carbohydrate is needed for the uptake of minerals by roots.

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 (3)