

Chippy the Robot was sent on a journey.

He started from his base station and went 2 m (metres) N (North).

Then he turned and went 2 m E (East), 3 m N, then 3 m W (West) and 2 m S (South).

After that he went 2 m E, 3 m N and 3 m W again.

Then he went 5 m S and 4 m E. Finally, he went 1 m S.

There he stopped.

How many metres altogether did Chippy travel on that journey?

How far and in what direction must Chippy travel to get back to his base station?

The next day Chippy went on another journey.

This time he started 3 m (metres) West and 4 m North of his base station. He went 6 m E, 2 m N, 4 m W and 1 m S.

He then turned round and retraced his route for 4 m.

Where did he end up?

Can you find the shortest route to get him back to his base station? How many metres did he have to go to get back?

Can you find him a route back which is exactly 12 m? How many different 12 m routes can you find?

