

1 inch $\approx 2.5 \mathrm{~cm}$

## Metric System

## Imperial System

## Which is the

 older system?
## Here is a chart giving us some information about distances and times.

|  |  | Kilometres | Miles | Hours | Minutes |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Norwich | to | Oxford | 272 | 169 | 3 | 35 |
| Norwich | to | Leicester | 190 | 118 | 2 | 40 |
| Norwich | to | London | 190 | 118 | 2 | 40 |
| Norwich | to | Cambridge | 105 | 65 | 1 | 25 |
| London | to | Leicester | 167 | 104 | 2 | 20 |
| London | to | Oxford | 100 | 62 | 1 | 25 |
| London | to | Cambridge | 100 | 62 | 1 | 25 |
| Leicester | to | Oxford | 122 | 76 | 1 | 40 |
| Leicester | to | Cambridge | 117 | 73 | 1 | 35 |
| Cambridge | to | Oxford | 166 | 103 | 2 | 15 |

Miles, feet and inches are old units of length. These are known as imperial units of length but are not now commonly used in maths.

- There are 12 inches in a foot.

GUIDED

- An inch is roughly equal to 2.5 centimetres.
- A foot is roughly equal to 30 centimetres.
- A mile is roughly equal to 1.5 kilometres.

|  |  |  | Kilometres | Miles | Hours | Minutes |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Norwich | to | Oxford | 272 | 169 | 3 | 35 |
| Norwich | to | Leicester | 190 | 118 | 2 | 40 |
| Norwich | to | London | 190 | 118 | 2 | 40 |
| Norwich | to | Cambridge | 105 | 65 | 1 | 25 |
| London | to | Leicester | 167 | 104 | 2 | 20 |
| London | to | Oxford | 100 | 62 | 1 | 25 |
| London | to | Cambridge | 100 | 62 | 1 | 25 |
| Leicester | to | Oxford | 122 | 76 | 1 | 40 |
| Leicester | to | Cambridge | 117 | 73 | 1 | 35 |
| Cambridge | to | Oxford | 166 | 103 | 2 | 15 |



1. How many miles is it from Norwich to London?
2. How many kilometres is it from London to Leicester?
3. How many hours and minutes does it take to get from

## GUIDED

 PRACTICE Cambridge to Oxford?|  |  | Kilometres | Miles | Hours | Minutes |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Norwich | to | Oxford | 272 | 169 | 3 | 35 |
| Norwich | to | Leicester | 190 | 118 | 2 | 40 |
| Norwich | to | London | 190 | 118 | 2 | 40 |
| Norwich | to | Cambridge | 105 | 65 | 1 | 25 |
| London | to | Leicester | 167 | 104 | 2 | 20 |
| London | to | Oxford | 100 | 62 | 1 | 25 |
| London | to | Cambridge | 100 | 62 | 1 | 25 |
| Leicester | to | Oxford | 122 | 76 | 1 | 40 |
| Leicester | to | Cambridge | 117 | 73 | 1 | 35 |
| Cambridge | to | Oxford | 166 | 103 | 2 | 15 |
|  |  |  |  |  |  |  |



These numbers show us direct routes. But now, suppose we go on journeys involving three or four cities.

For example, we could go from Norwich to Oxford but go through Cambridge on the way.

## INTELLIGENT PRACTICE

How many kilometres would you travel in total? What is this in miles? And how long (in time) is this?

## YOU CAN WRITE YOUR ANSWERS HERE.

|  |  | Kilometres | Miles | Hours | Minutes |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Norwich | to | Oxford | 272 | 169 | 3 | 35 |
| Norwich | to | Leicester | 190 | 118 | 2 | 40 |
| Norwich | to | London | 190 | 118 | 2 | 40 |
| Norwich | to | Cambridge | 105 | 65 | 1 | 25 |
| London | to | Leicester | 167 | 104 | 2 | 20 |
| London | to | Oxford | 100 | 62 | 1 | 25 |
| London | to | Cambridge | 100 | 62 | 1 | 25 |
| Leicester | to | Oxford | 122 | 76 | 1 | 40 |
| Leicester | to | Cambridge | 117 | 73 | 1 | 35 |
| Cambridge | to | Oxford | 166 | 103 | 2 | 15 |
|  |  |  |  |  |  |  |



Now you could try and find the longest route (in terms of distance) for visiting all five cities.
What about the shortest route for visiting all five cities? How much longer does it take to travel the longest route compared with the shortest route?

## YOU CAN WRITE YOUR ANSWERS HERE.

