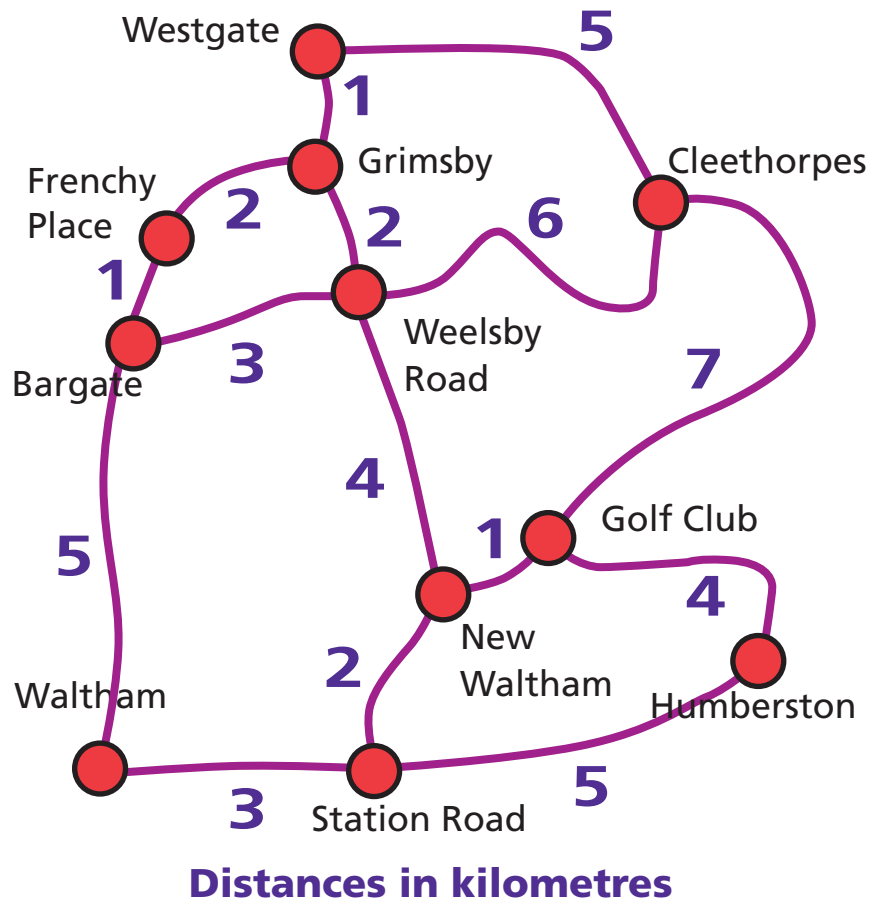# cable connections

The **mathematics** here is often used at work. It solves a variety of networking problems.

cre(x)ate
maths

## Can you link these places using the shortest length of cable?

■ **Your task** is to plan how to lay cables for a cable TV service between all the places on the map.

■ **Laying cable** is very expensive so you need to keep the total length of cable as short as possible.





Westgate 5
1
Frenchy Place
Grimsby
Cleethorpes
2    2    6
1
Bargate
3
Weelsby Road
7
4
5
Golf Club
1
4
Waltham    New Waltham    Humberston
2
3    Station Road    5

**Distances in kilometres**

■ Make sure all the locations are **connected**. They do not have to be connected directly, as the signals travel along the cables at the **speed of light**!

■ You discover that due to planned engineering works it will not be possible to lay cable directly between Weelsby Road and New Waltham.

■ What is the **shortest length of cable** required now?

Getting there