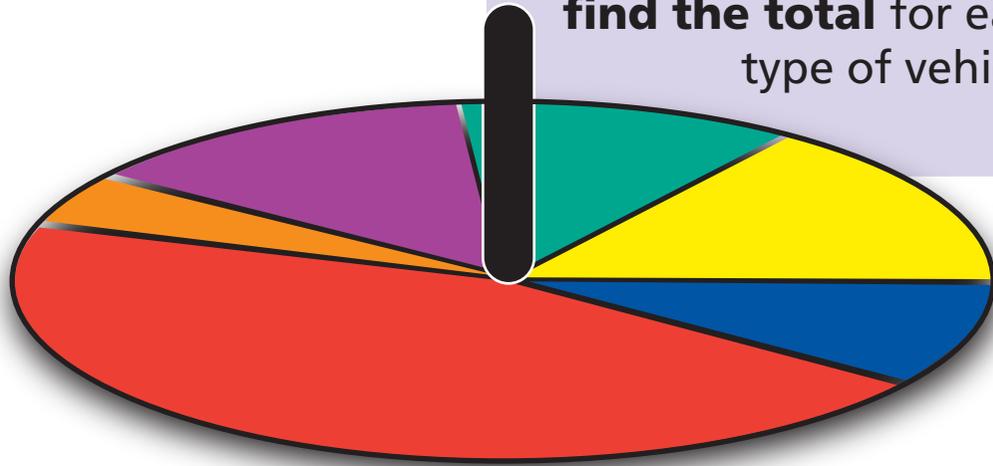With large ferries, the vehicles are sorted into **different types on arrival.**

But with small ferries, there is just one queue… How do you **maximise the fit**?

create maths

Analyse the data sheet to **find the total** for each type of vehicle.

Use your analysis to create a spinner with the different sections **matching the chance** of the different vehicles arriving at the ferry.

First fit

Work from one side of the ferry.

Place the vehicle in the first available lane.

Do not return to a lane once you have begun another.

Full bins

Look for combinations that best fill the lanes.

Use the spinner to **model** the arrival of vehicles.

Fit the vehicles on the ferry using the **First fit** algorithm.

Now use the same arrivals data and the **Full bins** algorithm.

Which method is best? **Why?**

Currently there is **no known way** of finding a perfect solution to problems like these. Mathematicians are still working on it!

getting there