CALCULATE THE SPEED OF THE PLANETS

TASK 1

Complete the table below to calculate the speed at which each of the planets in the Solar System is travelling.

ASSUMPTION:

For this activity, you will assume that all planets travel in circular orbits around the Sun. In reality, their orbits are elliptical.

YOU WILL NEED:

- The Planet Datasheet
- The following formulae:
    - circumference of a circle = $2\pi r$
    - Speed = distance ÷ time

> **TIP!**
> Think about the units of measurement involved.

Planet	Distance travelled in 1 orbit	Time taken for 1 orbit	Speed of travel (km/hour)
Mercury			
Venus			
Earth			
Mars			
Jupiter			
Saturn			
Uranus			
Neptune			

TASK 2

Answer the following questions (it may help if you write them in order, from slowest to faster):

1. Which planet is the **fastest?**

2. Which planet is the **slowest?**

3. What is the **range** of the speeds?

TASK 3

Draw a scatter graph of the **speed** of planets against **distance from the Sun** in AU.

Do you notice any pattern or correlation?

What might cause any pattern or correlation you see?

EXTRA TASK

Choose 2 planets (for example, Mercury and Venus).
If they were lined up in the sky, **how long** would it take until they lined up again?
Have a go at working it out using what you know from Task 1.