



# Planet Maths

Today you are going to be a planet detective! You will need to investigate facts and figures about the planets and analyse how they relate to each other - which is the biggest which is the closest, which spins fastest? Graphs and charts will help you see any patterns! To start your investigation:

### Go to the 'Planets' Gallery

First, you will need to fill in the table. Be careful about the 'units'! **Hint**, hours, days or years?

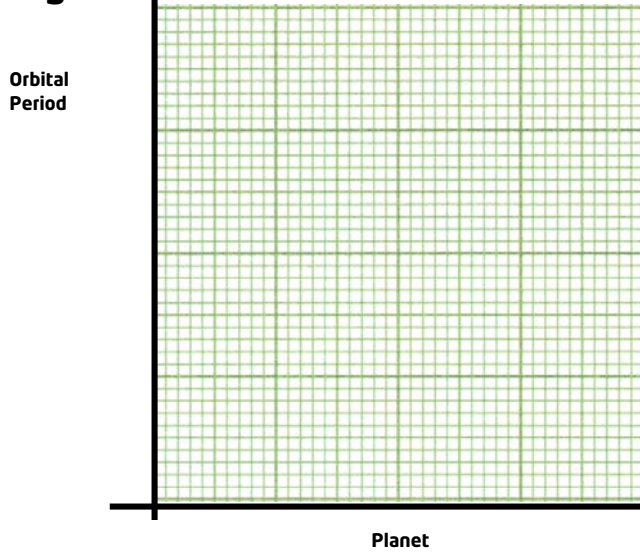
Planet	Diameter km	Distance To sun $10^6$ km	Day length	Orbit length
Mercury	4 878		58.7 days	
	12 102	108		
Earth			24 hours	365.25 days
	6 787			
		778		
Saturn	120 000		10.25 hours	
		2 868		84 years
Neptune	50 000			
		5 900		365.25 years



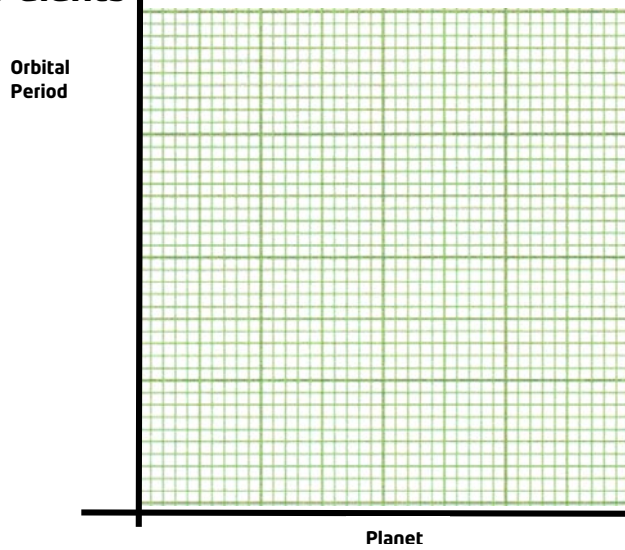
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Now you are going to plot the Orbital Period of the planets. Decide if you need a bar or line graph. Separate the planets into rocky planets and gas giants. What units go on the axes?

## Rocky Planets



## Gas Giants



## Planet Maths - Extension

Now for some calculations! From your Planets table, look at the 'diameter' column. You are going to calculate the **circumference** of each planet. You will need to use this equation.

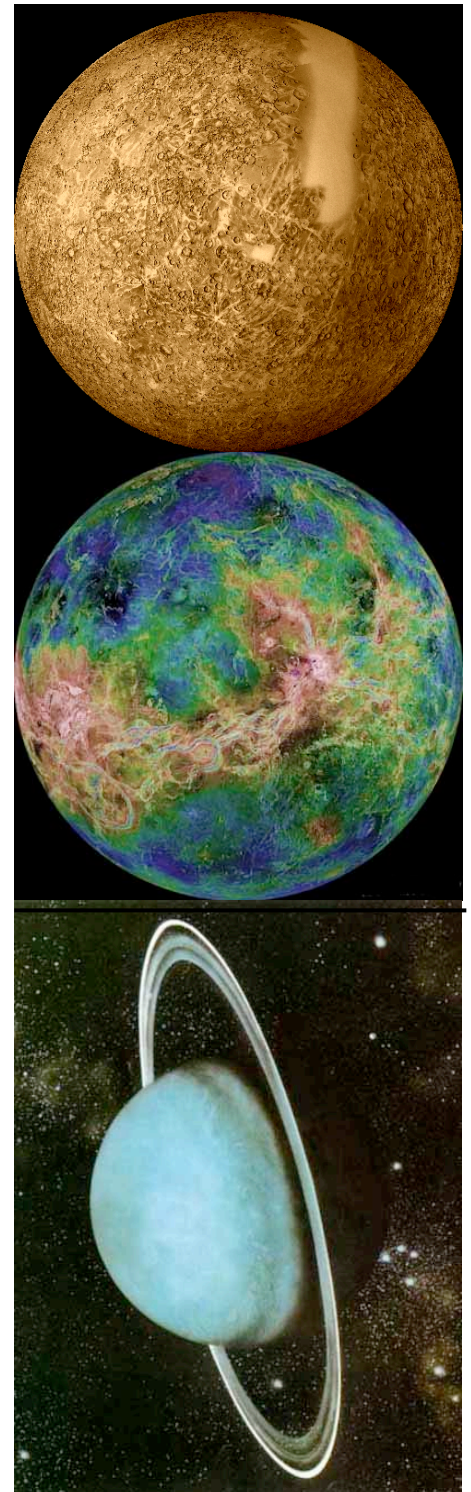
$$C = \pi D$$

C = circumference

$\pi$  = 3.142

D = diameter

Now using the circumference you have calculated, look at the day length column. Calculate how fast each planet is spinning in **kms/hour**. To do this, you need to divide the circumference by the day length. **Hint**; check the day length units! Record your results in the table below.



Planet	Circumference km	Spin Speed Km/hour
Mercury		
Venus		
Earth		
Mars		
Jupiter		
Saturn		
Uranus		
Neptune		
Pluto		