

In the table below we have provided the orbital distances, orbital periods, and masses for the six planets closest to the Sun.

Planet	Orbital Distance (in astronomical units—AU)	Orbital Period (in years)	Planet Mass (in units of Earth's mass)
Mercury	0.38	0.24	0.06
Venus	0.72	0.61	0.82
Earth	1.0	1.0	1.0
Mars	1.52	1.88	0.11
Jupiter	5.20	11.86	318
Saturn	9.54	29.46	95.2

- 9) What is the name of the planet that you identified the orbital distance for in Question 6?
- 10) Using the information provided in the table above and on the graph on the previous page, which of the answers below best describes how a planet's mass will affect its orbital period. Circle your choice.
- a) Planets that have small masses have longer orbital periods than planets with large masses.
 - b) Planets with the same mass will also have the same orbital period.
 - c) Planets that have large masses have longer orbital periods than planets with small masses.
 - d) A planet's mass does not affect the orbital period of a planet.

Explain your reasoning and cite a specific example from the table or graph to support your choice.