

Moon	Days
Pallene	1.15375
Daphnis	0.59408
Epimetheus	0.69433
Prometheus	0.61299
Mimas	0.94242
Pan	0.57505
Janus	0.69466
Pandora	0.62850
Aegaeon	0.80812
Atlas	0.60169
Anthe	1.03650
Methone	1.00957

Saturn's moons orbit the planet, just like our Earth orbits the sun. It takes Earth 365 Earth days to travel in its orbit once around the sun. The most distant moon of Saturn is called Fornjot and it takes 1,432 Earth days to orbit Saturn, or nearly 4 Earth years!

The table above gives the orbit periods for some of the moons closest to Saturn. The decimal values are in terms of Earth days, so for example Pan takes 0.57505 Earth days to go once-around Saturn in its orbit.

Problem 1 – Order the moons in terms of their increasing orbit time around Saturn by sorting the decimal values from smallest to largest.

Problem 2 – Which pair of moons have periods that differ by 0.00033 Earth days?

Problem 3 – Which pair of moons have periods that differ by 0.11725 Earth days?

Problem 1 – Order the moons in terms of their increasing orbit time around Saturn by sorting the decimal values from smallest to largest.

Moon	Days	Moon	Days
Pallene	1.15375	Pan	0.57505
Daphnis	0.59408	Daphnis	0.59408
Epimetheus	0.69433	Atlas	0.60169
Prometheus	0.61299	Prometheus	0.61299
Mimas	0.94242	Pandora	0.62850
Pan	0.57505	Epimetheus	0.69433
Janus	0.69466	Janus	0.69466
Pandora	0.62850	Aegaeon	0.80812
Aegaeon	0.80812	Mimas	0.94242
Atlas	0.60169	Methone	1.00957
Anthe	1.03650	Anthe	1.03650
Methone	1.00957	Pallene	1.15375

Problem 2 – Which pair of moons have periods that differ by 0.00033 Earth days?

Answer: **Epimetheus and Janus.**

Problem 3 – Which pair of moons have periods that differ by 0.11725 Earth days?

Answer: **Anthe and Pallene.**