

Astronomy Ranking Task: The Solar System

Exercise #4

Description: The table below shows some physical data for the eight planets in our solar system. The planets are assigned letters A through H.

Letter	Planet	Number of Moons	Magnetic Field Strength (Earths)	Atmospheric Pressure (Earths)*
A	Mercury	0	0.006	10^{-15}
B	Venus	0	0.00	92
C	Earth	1	1.000	1.000
D	Mars	2	0.00	0.006
E	Jupiter	63	19,519	>200
F	Saturn	62	578	>140
G	Uranus	27	47.9	>100
H	Neptune	13	27.0	>100

*Because they have no solid surfaces, atmospheric pressures for Jovian planets are estimates based on the weight of the gas at a given depth.

A. Ranking instructions: Rank the numbers of moons of the planets.

Ranking Order: Most 1 ____ 2 ____ 3 ____ 4 ____ 5 ____ 6 ____ 7 ____ 8 ____ Least

Or, the planets all have the same number of moons. ____ (indicate with a check mark)

Carefully explain your reasoning for ranking this way:

B. Ranking instructions: Rank the strengths of the planets' magnetic fields.

Ranking Order: Strongest 1 ____ 2 ____ 3 ____ 4 ____ 5 ____ 6 ____ 7 ____ 8 ____ Weakest

Or, the magnetic fields of the planets are the same strength. ____ (indicate with a check mark)

Carefully explain your reasoning for ranking this way:

C. Ranking instructions: Rank the atmospheric pressures of the planets.

Ranking Order: Highest 1 ____ 2 ____ 3 ____ 4 ____ 5 ____ 6 ____ 7 ____ 8 ____ Lowest

Or, the planets all have the same atmospheric pressure. ____ (indicate with a check mark)

Carefully explain your reasoning for ranking this way:
