

**Fill out the following table using Kepler's 3<sup>rd</sup> (harmonic) law:**

Solar system body:	Distance from the Sun [au]	Orbital period [years]
Mercury	0.39	
Venus		0.62
Earth	1.00	
Mars		1.88
Jupiter	5.20	
Saturn		29.5
Uranus	19.18	
Neptune		165
Pluto	39.44	
Ceres		4.60
Eris	67.86	
Sedna		11,390
Quaoar	43.69	
Farfarout		717
Tempel 1	3.14	
Halley's comet		74.7
3737 Beckman	2.41	

**Calculate Kepler's constant in SI units:**

$$(1\text{au})^3 / (1\text{yr})^2 = (\text{_____ m})^3 / (\text{_____ s})^2 = \text{_____ m}^3/\text{s}^2.$$

**Calculate Kepler's constant from Newton's law of gravity:**

$$GM_{\text{Sun}} / 4\pi^2 = (\text{_____}) (\text{_____}) / (\text{_____}) = \text{_____ m}^3/\text{s}^2.$$