

Exoplanets

Name: _____

Section: _____

Finding the Mass of an Exoplanet

	Object Name	Spectral Type	M _* (Solar Masses)	V _* (m/s)	Period (years)	Semi-major axis (AU)	M _p (Solar Masses)	M _p (Jupiter Masses)	M _p (Earth Masses)	Object Type
Ex	HD 27894 b	K2	.74	57.5	.0493	.122	5.76×10^{-4}	.603	192	Hot Jupiter
1	GJ 581 e	M5								
2	GS 2000+25	K3								
3	HD 209458 b	F8								
4	HD 70642 b	G5								

Finding the radius of HD 209458 b

T₁ = _____ (days)

T₂ = _____ (days)

R_p = _____ (m)

Density = _____ (kg/m³)

How does this compare to the density of water?

Surface Gravity = _____ (m/s²)

How does this compare to the surface gravity of the Earth? Could we comfortably stand on this planet? Why/why not?

The Drake Equation

	Pessimistic values	Optimistic values	Your values
N^*			
T_g			
f_p			
n_e			
f_l			
f_i			
f_c			
L			
N			
d			
In the galaxy?			