Name	Mass/kg (10>24)	Mass as % of Earth	Distance/m	Diameter/km	Diameter as % of Sun	Diameter as % of Parent
Sun	1988500	333,082.08	0	1391400037	100.00%	
Mercury	0.33	0.0552763819	57900000000	4879000	0.35%	
Venus	4.87	0.8157453936	108200000000	12104000	0.87%	
Earth	**5.97**	1	149599000000	12756000	0.92%	
Moon*	0.073	0.0122278057	384000000	3475000	0.25%	27.24%
Mars	0.642	0.1075376884	227900000000	6792000	0.49%	
Jupiter	1898	317.9229481	778600000000	142984000	10.28%	
Saturn	568	95.14237856	1433500000000	120537000	8.66%	
Uranus	86.8	14.53936348	2872500000000	51118000	3.67%	
Neptune	102	17.08542714	4495100000000	49528000	3.56%	
Pluto	0.0146	0.002445561139	5906400000000	2370000	0.17%	

Sources: https://nssdc.gsfc.nasa.gov/planetary/factsheet/ https://nssdc.gsfc.nasa.gov/planetary/factsheet/sunfact.html https://forum.unity3d.com/threads/unity-able-to-manage-full-scale-stellar-systems.38762/ https://en.wikipedia.org/wiki/Orbital_inclination

	Mass/kg		Distance/km	Distance/m
Sun	000,000,000,000,0	000,000,000,000	0	
Mercury	00,000,000,000,0	000,000,000,000	57900000	5,790,000,000,000.00
Venus	000,000,000,000,0	000,000,000,000	108200000	10,820,000,000,000.00
Earth	000,000,000,000,0	000,000,000,000	149600000	14,960,000,000,000.00
Moon*	0,000,000,000,0	000,000,000,000	384000	38,400,000,000.00
Mars	00,000,000,000,0	000,000,000,000	227900000	22,790,000,000,000.00
Jupiter	0,000,000,000,0	000,000,000,000	778600000	77,860,000,000,000.00
Saturn	,000,000,000,000	000,000,000,000	1433500000	143,350,000,000,000.00
Uranus	000,000,000,000	000,000,000,000	2872500000	287,250,000,000,000.00
Neptune	,000,000,000,000	000,000,000,000	4495100000	449,510,000,000,000.00
Pluto	0,000,000,000,0	000,000,000,000	5906400000	590,640,000,000,000.00

1.00E-02

1uuf = .02 speed

1UUF/1UUM = 0.02

1 UUd = 1 AU/m 149599000000

1 UUm = 1 Earth Mass/kg 5,974,200,000,000,000,000,000,000.00

1 UUt = 1 Earth Day/s 86400

1 UUf 0.003616333

*100 Calculator

	Input	0.05500000000000
	Output	5.5

	Distance Calculator	Mass Calculator	Time Calculator
Input Number:	227900000000	974,200,000,000,000,000,000,0	1
Answer:	1.5234059051196900000	1.0000000000000000000000	0.0000115740740740741
Answer * 100	152.3405905	100	0.00115740740740741
Answer / 100	0.01523405905	0.01	0.0000001157407407

Orbital Speed Calculator (input from nasa source) 1.616 ratio

Input	47.4	If G is at 1
Output	92.80000	92800
	47400	0.02737558407

0.0000005775439677

Force multiplier (set target speed to 100, force multiplier by 1, then input the velocity into the space below

Input	Output
1.638794000000000000	61.020482135033400000000

131622.2702

0.0000000006684536661

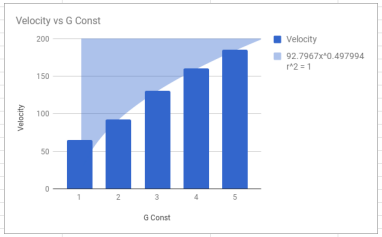
0.001157407407

G constant unity

6.67408e-11

6.67408E−11

	Velocity	Ratio			
47.4	65	0.7292307692	41713	0.00767	47.4/29.33 1.616 ratio
	92.8	0.5107758621	625000000000	0.0000000006674	
	131	0.3618320611			
	160.5	0.2953271028			
	185	0.2562162162			



G Const	Velocity
1	65
2	92.8
3	131
4	160.5
5	185

Required velocity for stable orbit of a given body at 1 G gave this series of numbers

target velocity is effectively velocity at apoapsis