








	Item	Radius	Angular Velocity (simple units)	Angular Velocity (rads^{-1})	Linear Velocity	Acceleration provided by...
	Dust on a record					
	Loop the loop					
	Swinging dog lead					
	Children's roundabout					
	Int. Space Station					
	Moon orbiting Earth					
	Earth orbiting Sun					

ANSWERS	Item	Radius	Angular Velocity (simple units)	Angular Velocity (rads ⁻¹)	Linear Velocity	Acceleration provided by...
	Dust on a record	6 inch	33rpm	1.1π rads ⁻¹	0.518ms ⁻¹	Friction
	Loop the loop	20cm	1 second	2π rads ⁻¹	1.257ms ⁻¹	Track pushing against wheels
	Swinging dog lead	1m	2 seconds	π rads ⁻¹	3.14ms ⁻¹	Pull on lead by person
	Children's roundabout	2m	10 seconds	$\frac{\pi}{5}$ rads ⁻¹	1.257ms ⁻¹	Arms holding on
	Int. Space Station	Earth radius +250 miles (=4209 miles)	1 orbit in 90 mins	$\frac{\pi}{2700}$ rads ⁻¹	17,630mph	Gravity
	Moon orbiting Earth	240,000 miles	1 orbit in 28 days	$\frac{\pi}{1209600}$ rads ⁻¹	2,244mph	Gravity
	Earth orbiting Sun	93 million miles	1 orbit in 365 days	$\frac{\pi}{15768000}$ rads ⁻¹	66,705mph	Gravity