4.1 Preparing a list of **metrics**

IUR's × Metrics Matrix

mountain bike suspension fork

20 IUR's \ 26 Metrics	Attenuation from dropout to handlebar at 10Hz	Spring preload	Maximum value from the Monster	Minimum descent time on test track	Damping coefficient adjustment range	Maximum travel (26-in. wheel)	Rake offset	Lateral stiffness at the tip	Total mass	Lateral stiffness at brake pivots	Headset sizes	Steertube length	Wheel sizes	Maximum tire width	Time to assemble to frame	Fender compatibility	Instils pride	Unit manufacturing cost	Time in spray chamber without water entry	Cycles in mud chamber without contamination	Time to disassemble/assemble for maintenance	Special tools required for maintenance	UV test duration to degrade rubber parts	Monster cycles to failure	Japan Industrial Standards test	Bending strength (frontal loading)
The suspension shall reduce vibration to the hands	●		●	●																						
The suspension shall allow easy traversal of slow, difficult terrain		●																								
The suspension shall enable high-speed descents on bumpy trails	●		●	●																						
The suspension shall allow sensitivity adjustment					●																					
The suspension shall preserve the steering characteristics of the bike						●	●																			
The suspension shall remain rigid during hard cornering		●						●																		
The suspension shall be lightweight									●																	
The suspension shall provide stiff mounting points for the brakes										●																
The suspension shall fit a wide variety of bikes, wheels, and tires											●	●	●	●												
The suspension shall be easy to install															●											
The suspension shall work with fenders																●										
The suspension shall instill pride																	●									
The suspension shall be affordable for an amateur enthusiast																		●								
The suspension shall be not contaminated by water																			●							
The suspension shall be not contaminated by grunge																				●						
The suspension can be easily accessed for maintenance																					●					
The suspension shall allow easy replacement of worn parts																					●	●				
The suspension can be maintained with readily available tools																						●				
The suspension shall last a long time																							●	●		
The suspension shall be safe in a crash																									●	●