

Quizbit Rubric | Rotational Mechanics | Cycling

	<u>Rubric item</u>		<u>Description</u>	<u>Points</u> (Circle One)
Completeness	Relevant physics	High level	Uses relevant physics in solution attempt	6
		Mid level	Some, but not all physical concepts used are relevant to the situation	4
		Low level	Physical concepts are mentioned	2
	All parts attempted	High level	All parts of problem have significant effort shown	6
		Mid level	Some parts of problem have significant effort shown	4
		Low level	Some parts of problem are started	2
Clarity of Communication	Legibility	High level	All parts of solution are legible	6
		Mid level	Some parts of solution are hard to read	4
		Low level	Significant parts of solution are hard and/or impossible to read	2
	Format	High level	Solution is highly organized and leads the reader through from start to finish in a logical, easy to follow manner	6
		Mid level	Solution is mostly organized, but it is necessary to hunt for important pieces	4
		Low level	Path of solution is hard to follow. Important pieces of solution are scattered and unlabeled.	2
Correctness	Physical Representation	High level	There is a physical representation of the spring or the waves. Alternatively, labels have been added to the provided picture to turn it into a physical representation.	2
	Part (a)	High level	Spring force equation is applied correctly yielding the correct answer and units	4
		Mid level	Spring force equation is applied nearly correct, with one small error or no units shown	3
		Low level	An attempt to use the spring force equation is used but there is more than one mistake	2
	Part (b)	High level	Angular frequency is connected to spring constant and period correctly, then combined to show how the period relates to mass and spring constant. Correct answer and units.	4
		Mid level	Correct expression connecting period and the mass and spring constant is shown, but not derived from the fundamental relationships	3
		Low level	An attempt to find the period was made.	1
	Part (c)	High level	Velocity equals frequency times wavelength or wavelength over period. Correctly finds wavelength from given information. Correct final answer with units.	5
		Mid level	Nearly everything for high level but there is one small mistake	4
		Low level	Velocity equals frequency times wavelength, OR correctly determines wavelength. Only has half of what's needed to complete question.	2
	Part (d)	High level	Uses correct form of the traveling wave equation. Correctly finds the wave number and angular frequency. Correctly defines amplitude. Has a relative minus sign between kx and ωt	5
		Mid level	Nearly everything for high level but there is one mistake	4
		Low level	Puts some of the pieces together to form a correct traveling wave equation.	2
	Sensemaking	High level	Presents a viable way you could find the speed with a smart phone and a measuring tape	4
		Low level	Attempts to find a way to determine the speed with a smart phone and measuring tape	2
Total:				