

Name: _____

Hydraulic Arm frame

	Free Standing	Articulating Motion on all 4 joints	Scaled up from original size to match sheet layout	Construction appearance
	5 pts	10 pts	20 pts	5 pts
Totals				

Hydraulic Arm Movement

	Joint 1 (x- axis) 5pts	Joint 2 (z-axis) 5 pts	Joint 3 (y-axis) 5 pts	Joint 4 (endeffector) 5 pts
Totals				

Hydraulic Arm Testing

	Rotational Motion Test (x-axis) 10 pts	Vertical Motion Test (z-axis) 10 pts	Forward Reach Test (y-axis) 10 pts	Gripper Extension test (endeffector) 10 pts
Totals				

Data Collection

X-axis

Trial 1 Input 10 ml Output _____ Distance covered _____	Trial 2 Input 10 ml Output _____ Distance covered _____	Trial 3 Input 10 ml Output _____ Distance covered _____
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Calculate % efficiency between trail 1 and trail 3

z-axis

Trial 1 Input 10 ml Output _____ Distance covered _____	Trial 2 Input 10 ml Output _____ Distance covered _____	Trial 3 Input 10 ml Output _____ Distance covered _____
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Calculate % efficiency between trail 1 and trail 3

y-axis

Trial 1 Input 10 ml Output _____ Distance covered _____	Trial 2 Input 10 ml Output _____ Distance covered _____	Trial 3 Input 10 ml Output _____ Distance covered _____
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Calculate % efficiency between trail 1 and trail 3

End effector

Trial 1 Input 10 ml Output _____ Distance covered _____	Trial 2 Input 10 ml Output _____ Distance covered _____	Trial 3 Input 10 ml Output _____ Distance covered _____
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Calculate % efficiency between trail 1 and trail 3

***Bonus*(15 pts on quiz grade)**

Graph the results as a line graph. Using the graph predict what would happen in trial 4.