Note: sheet metal part costs are calculated using their area and a base cost of $16.40/sqft for 1/8" thk 6061
3D printed parts are considered free because we all have filament already
Other parts marked $0.00 are because we have them already

Bought?	Have?	Who has?	Sub-assembly	Item Name/PN	Type	Vendor	Purpose / Description	Qty per unit	Units needed	Unit Price	Total Price	Link (if off-the-shelf)
☑	☑	Thomas	Table	Table	Off the shelf	Amazon	Air hockey table	1	1	$0.00	$0.00	
☑	☐	Thomas	Table	Mallet Insides	Sheet metal	Us	Rect area: 55 x 55 mm, 1/8" thk	4	1	$2.13	$2.13	
☑	☐	Thomas	Table	Mallet top	Sheet metal	Us	Rect area: 75 x 75 mm, 1/8" thk	1	1	$0.99	$0.99	
☑	☐	Thomas		M4x0.7 90deg countersunk, 12mm lg			Mallet screws					
☑	☐	Eric	Table foot	Table foot side plate	Sheet metal	Us	Rect area: 85 x 60 mm, 1/8" thk	1	8	$0.90	$7.20	
☐	☐		Table foot	Table foot base	3D printed	Us		1	4	$0.00	$0.00	
☑	☐	Thomas	Table foot	M6x1.00 25mm SHCS	Hardware (COTS)	McMaster	Table-to-foot mount, 2 needed per foot	50	1	$10.83	$10.83	Black-Oxide Alloy Steel Socket Head Screw, M6 x 1 mm Thread Size, 25 mm Long | McMaster-Carr
☑	☐	Thomas	Table foot	M6x1.00 nut	Hardware (COTS)	McMaster	Table-to-foot mount, 2 needed per foot	100	1	$3.42	$3.42	Zinc-Plated Steel Hex Nut, Medium-Strength, ISO Class 8, M6 x 1 mm Thread Size | McMaster-Carr
☑	☐	Thomas	Table foot	M4x0.7 25mm SHCS	Hardware (COTS)	McMaster	Foot-to-base, 2 needed per foot	50	1	$10.41	$10.41	Black-Oxide Alloy Steel Socket Head Screw, M4 x 0.7 mm Thread Size, 25 mm Long | McMaster-Carr
☑	☐	Thomas	Table foot	M4x0.7 nut	Hardware (COTS)	McMaster	Foot-to-base, 2 needed per foot	100	1	$3.39	$3.39	Zinc-Plated Steel Hex Nut, Medium-Strength, ISO Class 8, M4 x 0.7 mm Thread Size | McMaster-Carr
☑	☑	Thomas	Frame	Lateral rails (80-40)	COTS	Amazon	Lateral rails	2	1	$66.99	$66.99	Seekliny 2Pack 4080 T Slot Aluminum Extrusion 800mm Black Extruded Aluminum Profile 40x80 T-Slotted Framing European Standard Anodized Linear Rail for 3D Printer Accessories Parts: Amazon.com: Industrial & Scientific
☑	☑	Thomas	Frame	Longitudinal rails (80-40)	COTS	Amazon	Longitudinal rails	2	1	$36.99	$36.99	Seekliny 2Pack 4080 T Slot Aluminum Extrusion 400mm Black Extruded Aluminum Profile 40x80 T-Slotted Framing European Standard Anodized Linear Rail for 3D Printer Accessories Parts: Amazon.com: Industrial & Scientific
☑	☐	Eric	Frame	Corner Assy Attachment Plate Middle	Sheet metal	Us	Rect area: 225 x 180 mm, 1/4" thk	1	2			
☑	☐	Eric	Frame	Corner Assy Attachment Plate Back	Sheet metal	Us	Rect area: 225 x 180 mm, 1/4" thk	1	2			
☑	☐	Thomas	Frame	M8 Screws (35mm)	COTS	McMaster	Corner Gussets	50	1	$13.24	$13.24	https://www.mcmaster.com/91290A438/
☑	☐	Thomas	Frame	M8 Screws (18mm)	COTS	McMaster	Corner Gussets	25	2	$5.71	$11.42	https://www.mcmaster.com/91290A422/
☑	☑	Thomas	Frame	M8 T-Slot Nuts	COTS	Amazon	Corner Gussets	100	1	$12.99	$12.99	https://www.amazon.com/Rierdge-Sliding-Standard-Aluminum-Extrusion/dp/B0B7RRLHCF?crid=1PSBF6OEB8A0B&dib=eyJ2IjoiMSJ9.17cl1EH4o8b38Knb6GeHtq-m1je1oc9KaDH705toblpflygMYzCwZ2PuL05-jrrjgXETNUBeGhhIbYqKJik8WrmCF6kewkCv0occW0D2Y
☐	☑		CA - Motor	Motor	Electronics (COTS)	Us	Driving motor for cables (we have it already)	1	4	$0.00	$0.00	mj5208 brushless motor – mjbots Robotic Systems
☑	☐	Eric	CA - Motor	Motor mounting - outer plate	Sheet metal	Us	Rect area: 70 x 65 mm, 1/8" thk	1	4	$0.81	$3.24	
☑	☐	Eric	CA - Motor	Motor mounting - inner plate	Sheet metal	Us	Rect area: 70 x 65 mm, 1/8" thk	1	4	$0.81	$3.24	
☑	☐	Thomas	CA - Motor	M3x0.5 10mm SHCS	Hardware (COTS)	McMaster	4 needed per motor x 4 motors	100	1	$8.93	$8.93	https://www.mcmaster.com/91290A115/
☐	☑	Athul	CA - Motor	Encoder/Controller	Electronics (COTS)	Us	BLDC Controller/Encoder	1	4	$0.00	$0.00	moteus r4.11 controller – mjbots Robotic Systems
☑	☐	Eric	CA - Motor	Controller mounting plate	Sheet metal	Us	Rect area: 70 x 65 mm, 1/8" thk	1	4	$0.81	$3.24	
☑	☐	Thomas	CA - Motor	M2x0.4 8mm SHCS	Hardware (COTS)	McMaster	for controller mounting,4 x 4 needed	100	1	$7.12	$7.12	https://www.mcmaster.com/91292A832/
☑	☐	Thomas	CA - Motor	M2 nut	Hardware (COTS)	McMaster	"	100	1	$2.22	$2.22	https://www.mcmaster.com/90591A265/
☐	☐		CA - Motor	Motor-encoder plate spacer	3D printed	Us	Volume: 130 mm^3	1	12	$0.00	$0.00	
☑	☐	Thomas	CA - Motor	M3x0.5 30mm SHCS	Hardware (COTS)	McMaster	3 needed, motor to bearing retention cap	100	1	$14.01	$14.01	https://www.mcmaster.com/91290A130/
☐	☐	Thomas	CA - Pulley	Pulley belt	Misc (COTS)	VBeltguys	Connects motor to cable spool	1	4	$1.59	$6.36	220-5M-06 Synchronous Timing Belt
☐	☐		CA - Pulley	Motor-side pulley	3D printed	Us	Solid volume: 12250 mm^3	1	4	$0.00	$0.00	
☑	☑	Thomas	CA - Pulley	Motor-side bearing	Hardware (COTS)	Amazon		2	2	$6.39	$12.78	uxcell 6806-2RS Deep Groove Ball Bearings 30mm Inner Dia 42mm OD 7mm Bore Double Sealed Chrome Steel Z2 2pcs: Amazon.com: Industrial & Scientific
☑	☐	Eric	CA - Pulley	Motor-side bearing retention cap	Sheet metal	Us	Rect area: 40 x 40 mm, 1/8" thk	1	4	$0.29	$1.16	
☐	☐		CA - Pulley	Spool-side pulley	3D printed	Us	Solid volume: 5500 mm^3	1	4	$0.00	$0.00	
☑	☐	Eric	CA - Pulley	Pulley-spool interface reinforcement	Sheet metal	Us	Rect area: 25 x 25 mm, 1/8" thk	1	4	$0.12	$0.48	
☑	☐	Eric	CA - Spool	Spool endcap	Sheet metal	Us	Rect area: 95 x 95 mm, 1/8" thk	1	8	$1.60	$12.80	
☐	☐		CA - Spool	Spool piece	3D printed	Us	Solid volume: 40250 mm^3	1	12	$0.00	$0.00	
☑	☐	Thomas	CA - Spool	Spool bearing	Hardware (COTS)	Amazon	12mm x 21mm x 5mm flanged	10	1	$14.19	$14.19	uxcell F6801ZZ Flanged Ball Bearing 12x21x5mm Shielded Chrome Steel Flange Rip Bearings 10pcs: Amazon.com: Industrial & Scientific
☐	☐		CA - Spool	Bearing retention disk/washer	3D printed	Us	Solid volume: 200 mm^3	1	8	$0.00	$0.00	
☑	☐	Thomas	CA - Spool	12mm REX shaft, 88mm long	Hardware (COTS)	GoBilda	11mm flat to flat, for spool axle	1	4	$3.49	$13.96	https://www.gobilda.com/12mm-rex-shaft-aluminum-88mm-length/
☑	☐	Thomas	CA - Spool	12mm REX shaft, 80mm long	Hardware (COTS)	GoBilda	11mm flat to flat, for tensinoer plates	1	16	$3.49	$55.84	https://www.gobilda.com/12mm-rex-shaft-aluminum-80mm-length/
☑	☐	Thomas	CA - Spool	12mm REX shaft, 56mm long	Hardware (COTS)	GoBilda	11mm flat to flat, for tensinoer plates	1	12	$3.49	$41.88	https://www.gobilda.com/12mm-rex-shaft-aluminum-56mm-length/
☑	☐	Thomas	CA - Spool	M4x0.7 65mm SHCS	Hardware (COTS)	McMaster	3 needed per spool, x4	25	1	$10.26	$10.26	https://www.mcmaster.com/91290A083/?s=m4+screws
☑	☐	Thomas	CA - Spool	M4 washer	Hardware (COTS)	McMaster		100	1	$3.93	$3.93	https://www.mcmaster.com/93475A230/
☑	☐	Thomas	CA - Spool	M4 nut	Hardware (COTS)	McMaster		100	1	$3.39	$3.39	https://www.mcmaster.com/90591A255/
☑	☐	Thomas	CA - Tensioner	Tensioner Pulley and bracket	Hardware (COTS)	GoBilda	Idler pulley for tensioner	2	4	$7.99	$31.96	3408 Series V-Groove Pulley - 2 Pack - goBILDA®
☑	☐	Thomas	CA - Tensioner	Tensioner Mounting Extrusion	Hardware (COTS)	GoBilda	tensioner mounting extrusion, 24x24, 72mm	1	4	$4.79	$19.16	1109 Series goRAIL® (72mm Length) - goBILDA®
☑	☐	Thomas	CA - Tensioner	M4x0.7 x 20 SHCS	Hardware (COTS)	McMaster	needed for tensioner mounting, 2 per assy	100	1	$14.47	$14.47	Black-Oxide Alloy Steel Socket Head Screw, M4 x 0.7 mm Thread Size, 20 mm Long | McMaster-Carr
☑	☐	Thomas	CA - Tensioner	M4x0.7 nut	Hardware (COTS)	McMaster	No new purchase, exists elsewhere on BoM	-	-	-	$0.00	
☑	☐	Eric	CA - Tensioner	Tensioner mounting plate	Sheet metal	Us	Rect area: 30 x 90 mm, 1/8" thk	1	4	$0.48	$1.92	
☐	☐		CA - Tensioner	Tensioner plate spacer	3D printed	Us	Solid volume: 11000 mm^3	1	4	$0.00	$0.00	
☑	☐	Thomas	CA - Tensioner	M4x0.7 square nut for extrusion	Hardware (COTS)	GoBilda	Nuts for 24mm extrusion tensioner mount	25	1	$12.99	$12.99	Hurricane Nut for goRAIL® - 25 Pack - goBILDA®
☑	☐	Eric	CA - Other hardware	Main Plate - Motor-side	Sheet metal	Us	Rect Area: 120 x 120 mm, 1/8" thk	1	4	$2.54	$10.16	
☑	☐	Eric	CA - Other hardware	Main Plate - Outer Side	Sheet metal	Us	Rect Area: 120x 120mm, 1/8" thk	1	4	$2.54	$10.16	
☑	☐	Thomas	CA - Other hardware	M4x0.7 10mm SHCS	Hardware (COTS)	McMaster	~20 needed per subassembly, x4	100	1	$13.55	$13.55	https://www.mcmaster.com/91290A144/
☐	☐		CA - Other hardware	M4x0.7 16mm SHCS	Hardware (COTS)	McMaster	~10 needed per subassembly, x4	100	1	$13.72	$13.72	https://www.mcmaster.com/91290A154/
☐	☐		CA - Other hardware	Shield main	3D printed		3d printed					
☑	☐	Thomas	CA - Other hardware	Shield clear		McMaster	Clear acrylic	1	1	$6.95	$6.95	
☑	☐	Thomas	Camera mount	M3 nuts (bruh)	Hardware (COTS)	McMaster		100	1	$3.06	$3.06	90591A250
☑	☐	Thomas	Camera mount	M4x0.7 50mm SHCS		McMaster		1	3	$0.94	$2.82	
☑	☐	Thomas	Camera mount	M2.5 20mm SHCS		McMaster		25	1	$10.28	$10.28	https://www.mcmaster.com/91290A108/
☑	☐	Thomas	Camera mount	M2.5 nut		McMaster		100	1	$2.22	$2.22	https://www.mcmaster.com/90591A270/
☑	☐	Thomas	Camera mount	6mm aluminum rod		McMaster					$0.00	
☐	☐		Camera mount	Miscellaneous 3D prints	3D printed	Us		-	-	$0.00	$0.00	
☑	☐	Thomas	Electronics	PSU - RSP-750-24	COTS	Digikey	750W 24V PSU for wall-powered operation	1	1	$186.20	$186.20	RSP-750-24 MEAN WELL USA Inc. | Power Supplies - External/Internal (Off-Board) | DigiKey
☐	☑		Electronics	Power Distribution Block	COTS	Us	Power Distribution for Robot	1	1	$84.00	$84.00	mjpower-ss – mjbots Robotic Systems
☐	☑		Electronics	CAN Cables: Various Lengths	COTS	Us	Motor Communications	1	1	$0.00	$0.00	JST PH3 Cable – mjbots Robotic Systems
☑	☑	Athul	Electronics	Power/I2C Cables: Various Lengths	COTS	Us	Power Delivery for Motors	1	1	$0.00	$0.00	
☐	☑	Larry	Electronics	NVIDIA Jetson Nano	COTS	Us	Central Computer for Robot	1	1	$249.00	$249.00	https://www.amazon.com/NVIDIA-Jetson-Orin-Nano-Developer/dp/B0BZJTQ5YP/ref=sr_1_1?dib=eyJ2IjoiMSJ9.WXnsXcibbbRFZBJ_cz2X3McOD3sYZiRC8-LwYZqgIBjnLTvAqPEdr_om9r9mGdzIIESxRuCURGnVSN_S9OY25s9KwDzTRa1HsIE_ZuCdRvhAfEXk9yx3R
☐	☑	Larry	Electronics	USB2.0 UVC Camera Module	COTS	Amazon	120fps 720p camera for puck detection	2	1	$35.99	$35.99	USB2.0 UVC Camera Module 1M Global Shutter Mono Sensor OV9281 720p 120fps with UVC Driver External Trigger Strobe
										Total:	$1,107.64	
				M3 x 15 for spool-side pulley mounting								
				More long m4 for spool								