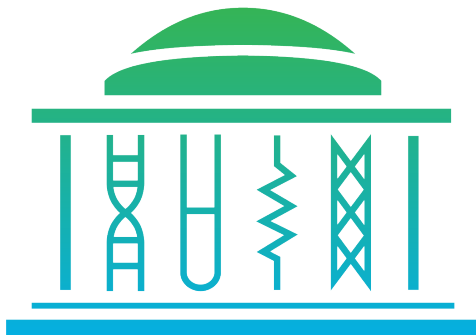


Science Olympiad
MIT Invitational

January 24, 2026

Machines C Test Masses



Four sets of test masses were prepared for the tournament using 1/4" steel ball bearings in 2.75" by 4" burlap sacks with a flexible loop made from string and were calibrated using a scale with ± 0.01 g precision.

Their measurements are tabulated below in grams.

Set #	Mass A	Mass B	Mass C
1	22.83	77.94	178.29
2	22.87	77.96	178.28
3	22.84	78.00	178.30
4	22.86	78.00	178.30
Average	22.85	77.98	178.29

The target mass ratios were $A/B = 0.293$ and $B/C = 0.437$.