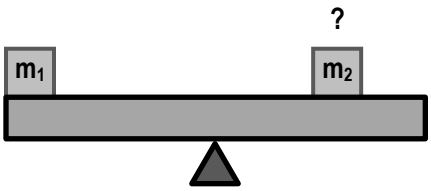
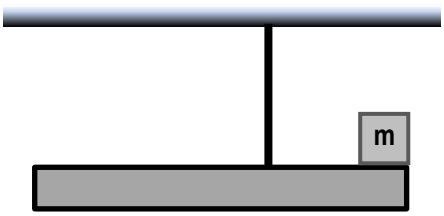
EXAMPLE: POSITION OF SECOND KID ON SEESAW

EXAMPLE**:** A 4 m-long seesaw 50 kg in mass and of uniform mass distribution is pivoted on a fulcrum at its middle, as shown. Two kids sit on opposite sides of the seesaw. The kid on the left (30 kg) sits on the very edge of the seesaw. How far from the fulcrum should the kid on the right (40 kg) sit, if they want to balance the fulcrum**?**



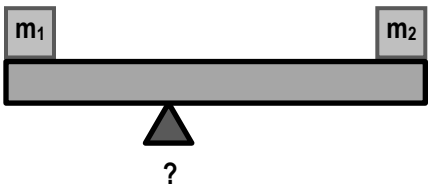
PRACTICE: BALANCING A BAR WITH A MASS

PRACTICE**:** A 20 kg, 5 m-long bar of uniform mass distribution is attached to the ceiling by a light string, as shown. Because the string is off-center (2 m from the right edge), the bar does not hang horizontally. To fix this, you place a small object on the right edge of the bar. What mass should this object have, to cause the bar to balance horizontally**?**



PRACTICE: POSITION OF FULCRUM ON SEESAW

PRACTICE**:** Two kids **($m_{,LEFT}$** = 50 kg**, $m_{,RIGHT}$** = 40 kg**)** sit on the very ends of a 5 m-long, 30 kg seesaw. How far from the left end of the seesaw should the fulcrum be placed so the system is at equilibrium**? (**Remember the weight of the seesaw**!)**



EXAMPLE: MULTIPLE OBJECTS HANGING

EXAMPLE**:** The system of objects shown is in linear and rotational equilibrium, held by light, vertical ropes and light, horizontal rods. Calculate the**: (a)** tension on all 5 vertical ropes**; (b)** 2 missing masses **(m_A** and **m_C).** Use g = 10 m/s**².**