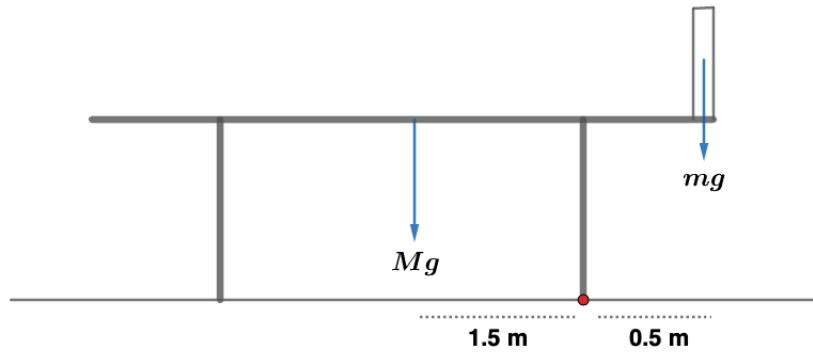# 2008 F=ma Exam: Problem 15

Kevin S. Huang

We balance torques around the bottom of the right leg. When the table is about to tip over, the normal force from the left leg goes to zero. Therefore, the only contributions are from the weights of the table and carpenter. We have

$$Mg(1.5\,\mathrm{m}) = mg(0.5\,\mathrm{m})$$
$$m = 3M = 150\,\mathrm{kg}$$

so the answer is $\boxed{\text{D}}$.