ATPL Meteorology Typical Exam Question 1

Center of Gravity Calculation

AUW = 7,450 lbs
Change in CG position required = 2”
Mass to be moved = 260 lbs

What distance does it need to be moved?

$$\text{Change in CG} = \frac{\text{Weight shifted} \times \text{Distance moved}}{\text{AUW}}$$

→ $$\text{Distance moved} = \frac{\text{Change in CG} \times \text{AUW}}{\text{Weight moved}}$$

$$= \frac{-2 \times 7450}{260} = 57.3 \text{ inches}$$

The correct answer will have to be 58 inches because 57 will not be sufficient.

The correct answer is c)