With the following changes, ASA’s Inspection Authorization Test Prep, Eighth Edition, provides complete preparation for the FAA Inspection Authorization Knowledge Exam. This test continues to reference the Computer Testing Supplement for Inspection Authorization (FAA-CT-8080-8D).

About the Test Changes
The FAA exams are “closed tests” which means the exact database of questions is not available to the public. However, each test cycle the FAA provides a What’s New document, which identifies subjects that have been removed or added to a test. This document also includes pertinent information to ensure training and testing remains correlated, which in turn promotes a reliable certification system.

The question and answer choices in this book provide a comprehensive representation of FAA questions, derived from history and experience with the airman testing process. You might see similar although not exactly the same questions on your official FAA exam. Answer stems may be rearranged from the A, B, C order you see in this book. Therefore, be careful to fully understand the intent of each question and corresponding answer while studying, rather than memorize the A, B, C answer. You may be asked a question that has unfamiliar wording; studying and understanding the information in this book and the associated reference documents will give you the tools to answer all types of questions with confidence. We invite your feedback. After you take your official FAA exam, let us know how you did. Were you prepared? Did the ASA products meet your needs and exceed your expectations? We want to continue to improve these products to ensure applicants are prepared, and operate safely and effectively with Inspection Authorization. Send feedback to: cfi@asa2fly.com

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293b. A light twin-engine airplane has its empty weight CG at 24.5% of the MAC. Using the following information, determine the location of the CG in inches.
MAC ............................................ 75.5 inches
LEMAC ........................................ 144.8 inches
Empty weight .................................. 7,201 lbs
A— 158.76 inches.
B— 163.29 inches.
C— 175.15 inches.

Use the formula:

\[ CG \text{ in } \%\text{MAC} = \frac{\text{distance aft of MAC} \times 100}{\text{MAC}} \]

Substitute the given data from the question and solve for the distance aft of MAC:

\[ 24.5\% = \frac{\text{distance aft of MAC} \times 100}{75.5} \]

\[ \frac{24.5 \times 75.5}{100} = 18.49 \text{ inches} \]

Add the distance aft of MAC to the LEMAC to find the CG:

\[ 18.49 + 144.8 = 163.29 \text{ inches} \]

Note: the empty weight given in the problem is not used to calculate the answer.

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