

Amendment to the Firefighter Selection Tool Preparation Study Guide



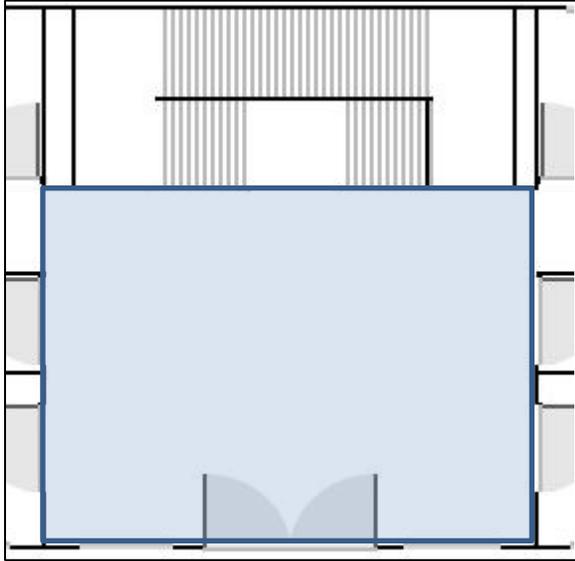
The version of the FST Preparation Guide you received as part of your application to the Houston Entry-level Firefighter position requires a correction to question 8. The corrected version of question 8 is presented below. Please use the same diagram found within the FST Preparation Guide when answering this question. A full detailed description of how to answer this question is presented on a separate page.

8. A fire has broken out on the second floor in Room H and quickly spread to Storage Room J. Your commanding officer has asked you to place a water proof tarp in the main lobby area on the first floor (the area outside of room A, B, G and F) to protect it from water damage. In order to grab the correct size tarp you need to calculate the area of the main lobby. The lobby area extends from the front doors to the edge of the stairwell and from Rooms A and B to Rooms F and G. Which of the following is the correct area?
- a. 216 square feet
 - b. 360 square feet
 - c. 1,980 square feet
 - d. 2,700 square feet

Correct Response

8. The correct answer is **D – 2,700 square feet.**

To correctly answer this question, you need to calculate the area of the space referenced in the stem. That area is shown here:



The formula for the area of a space is the length x the width of the space. Both of these values must be determined to calculate the area highlighted.

Length: It is given that the total length of the building is 160 ft. The length for every other space in the building is provided except for the area of the lobby. By taking the total length and subtracting the lengths of the other spaces, the length of the lobby can be found.

$$\text{Lobby Length} = 160 \text{ ft} - (\text{Room C Length} = 20\text{ft}) - (\text{Room A Length} = 30\text{ft}) - (\text{Room G Length} = 30\text{ft}) - (\text{Stairwell Length} = 20\text{ft}); \text{ or } 60 \text{ ft.}$$

Width: It is given that the total width of the building is 66 ft. The widths are provided such that you determine the width of the lobby. First you must determine the missing length of the hallway (the area from the stairwell to the start of the rooms (A and F)). This is done by taking the total width and subtracting the widths of the other spaces.

$$\text{Hallway Width} = 66\text{ft} - (\text{Room C Width} = 33 \text{ ft}) - (\text{Room D Width} = 21\text{ft}); \text{ or } 12\text{ft.}$$

Now, we can calculate the width of the of the lobby area by using addition.

$$\text{Lobby Width} = (\text{Room C Width} = 33\text{ft}) + (\text{Hallway Width} = 12\text{ft}); \text{ or } 45\text{ft.}$$

Area:

Using the obtained information about the lobby's dimensions, the area of the lobby can be found by using the equation presented earlier.

$$\text{Area of Lobby} = \text{Length (60ft)} \times \text{Width (45ft)}; \text{ or } 2,700 \text{ square feet.}$$