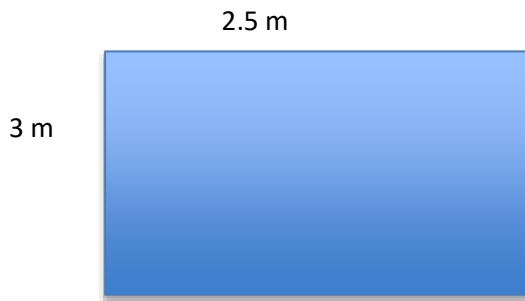


Technician’s Plan Sheet **Answer Key**

Day 4 Homework (Tier 3) Answer Key

Hospital Exam Room: This room is often the first “stop” upon entering the hospital. Even though patients enter this room in emergency situations, they are often in this room for hours, awaiting exams, tests, and decisions about possible admission. This can be a very scary time and the hospital would like to provide patients with the ability to change the color of this room if they find it is not relaxing and comforting. This change must be quick, easy, and efficient. Your new paint might be the perfect choice, but you will need to know more details before you can propose this to the hospital board!

This exam room only has one wall that can be painted, as the other walls are either covered in exam equipment or are made up of curtains. The hospital is requiring that each wall is initially given 2 coats of paint.



Summary:

Dye Choice student choice

Original Color compare to record sheet

Change Color compare to record sheet

Indicator Needed compare to record sheet

Amount of Dye Needed _____

Rationale: (show proportion process)

Hint: You are comparing the paper prototype/model to the real room

Hint: The paper’s dye /area ratio = The wall’s dye/area ratio

The work will be different based on the choice of dye the student chooses.

Student should have and use the dye/area ratio on recording guide for ft².

(a) Use the ratio of paint per 2 times area of paper or the unit rate and then multiply the final answer by 2 to simulate the 2 coats

(b) The correct area of the wall as shown is 7.5 m²

(c) Possible setups include

$$\frac{50 \text{ mL}}{0.1 \text{ m}^2} = \frac{x \text{ mL}}{7.5 \text{ m}^2}$$

The final answer would need to be multiplied by 2 to account for the 2 coats!

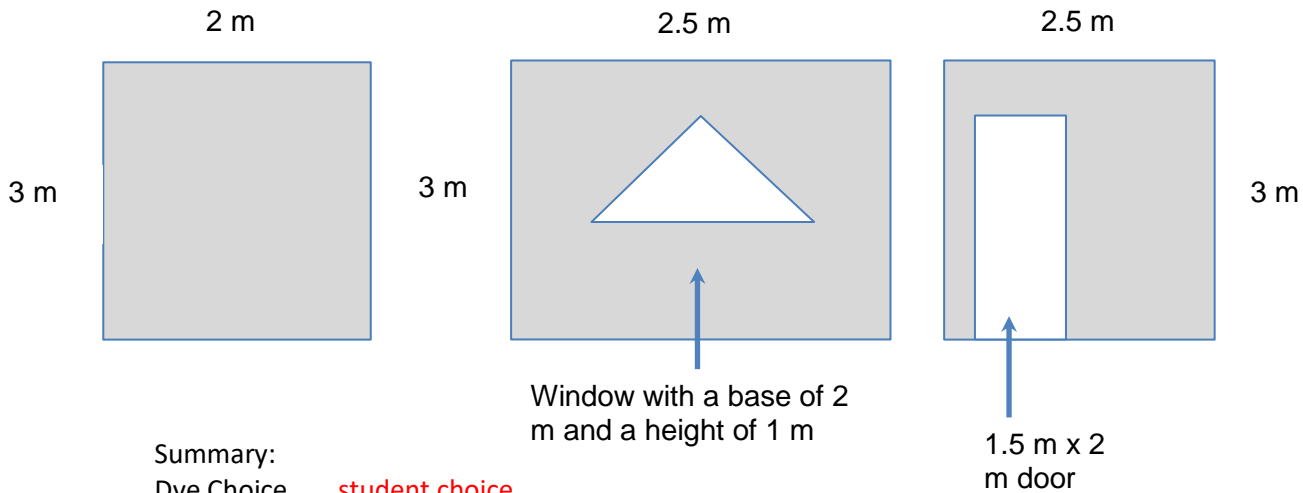
$$\frac{50 \text{ mL}}{0.1 \text{ m}^2} = \frac{x \text{ mL}}{15 \text{ m}^2}$$

The final answer should NOT be multiplied by 2 as the 2 coats are already accounted for in the wall’s area being doubled.

Day 4 Homework (Tier 2) Answer Key

Hospital Exam Room: This room is often the first “stop” upon entering the hospital. Even though patients enter this room in emergency situations, they are often in this room for hours, awaiting exams, tests, and decisions about possible admission. This can be a very scary time and the hospital would like to provide patients with the ability to change the color of this room if they find it’s not relaxing and comforting. This change must be quick, easy, and efficient. Your new paint might be the perfect choice, but you will need to know more details before you can propose this to the hospital board!

This exam room only has three walls that can be painted, as the other wall is covered in exam equipment. The hospital is requiring that each wall is initially given 2 coats of paint.



Summary:

Dye Choice student choice

Original Color _____

Change Color _____

Indicator Needed _____

Amount of Dye Needed _____

Rationale: (show proportion process)

Hint: You are comparing the needed paint on the paper prototype/model to the needed paint for the real room

The work will be different based on the choice of dye student chooses.

Student should have and use the dye/area ratio on the recording guide for m².

(a) Use the ratio of paint per 2 times area of paper or the unit rate and then multiply the final answer by 2 to simulate the 2 coats.

(b) The correct area of the walls as shown is $6 \text{ m}^2 + 6.5 \text{ m}^2 + 4.5 \text{ m}^2 = 17 \text{ m}^2$

(c) Possible setups include

$$\frac{50 \text{ mL}}{0.1 \text{ m}^2} = \frac{x \text{ mL}}{17 \text{ m}^2}$$

$$0.1 \text{ m}^2 \quad 17 \text{ m}^2$$

The final answer would need to be multiplied by 2 to account for the 2 coats!

$$\frac{50 \text{ mL}}{0.1 \text{ m}^2} = \frac{x \text{ mL}}{34 \text{ m}^2}$$

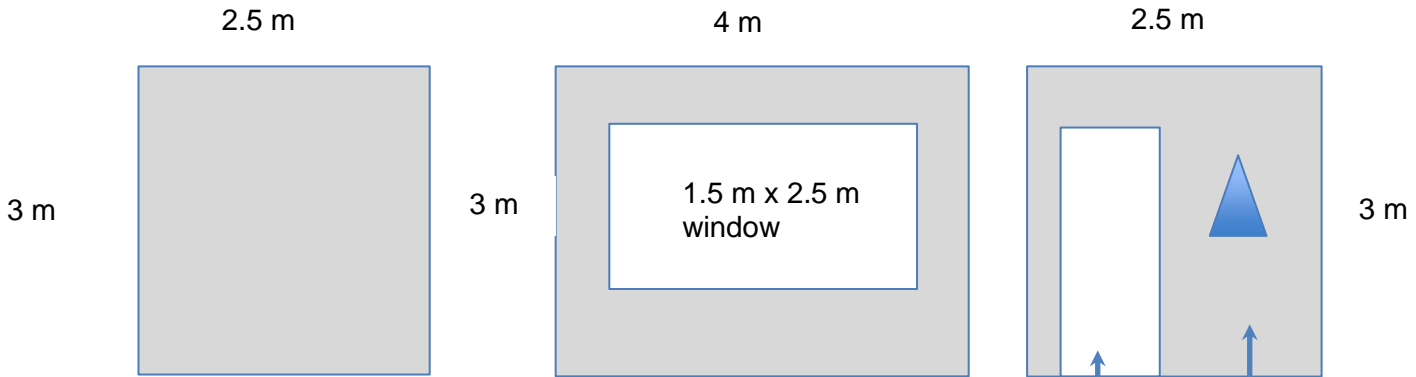
$$0.1 \text{ m}^2 \quad 34 \text{ m}^2$$

The final answer should NOT be multiplied by 2 as the 2 coats are already accounted for in the wall’s area being doubled.

Day 4 Homework (Tier 1) Answer Key

Hospital Exam Room: This room is “home away from home” while in the hospital for each patient. This can be a very scary time and the hospital would like to provide patients with the ability to change the color of this room if they find it is not relaxing and comforting. This change must be quick, easy, and efficient. Your new paint might be the perfect choice, but you will need to know more details before you can propose this to the hospital board!

This exam room has multiple walls that can be painted, as shown below. The hospital is requiring that each wall is initially given 2 coats of paint.



Summary:

Dye Choice__student choice _____
 Original Color _____
 Change Color _____
 Indicator Needed _____
 Amount of Dye Needed _____
 Rationale: (show proportion process)

1.5 m x 2 m door
 b = 0.5 m
 h = 1.5 m board

- The work will be different based on the choice of dye student chooses.
 Student should have and use the dye/area ratio on recording guide for m².
- (a) Use the ratio of paint per 2 times area of paper or the unit rate and then multiply the final answer by 2 to simulate the 2 coats are both acceptable approaches.
 - (b) The correct area of the wall as shown is $7.5 \text{ m}^2 + 8.25 \text{ m}^2 + 4.125 \text{ m}^2 = 19.875 \text{ m}^2$
 - (c) Possible setups include
 - $\frac{50 \text{ mL}}{0.1 \text{ m}^2} = \frac{x \text{ mL}}{19.875 \text{ m}^2}$ The final answer would need to be multiplied by 2 to account for the 2 coats!
 - $\frac{50 \text{ mL}}{0.1 \text{ m}^2} = \frac{x \text{ mL}}{39.75 \text{ m}^2}$ The final answer should NOT be multiplied by 2 as the 2 coats are already accounted for in the wall’s area being doubled.