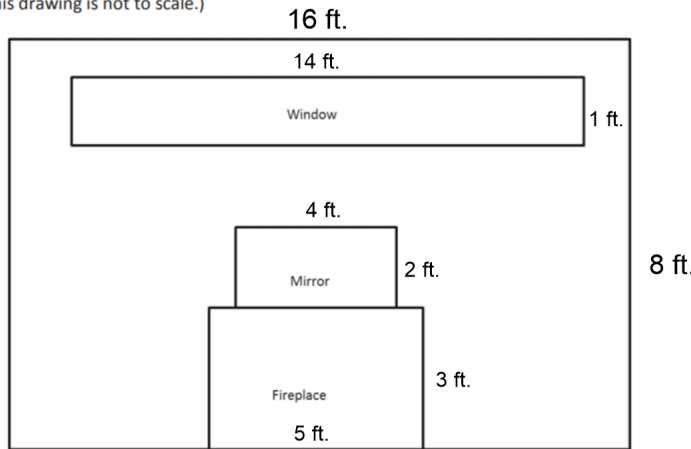


Name _____

Date _____

Problem Set Answer Key

1. Below is a drawing of a wall that is to be covered with either wallpaper or paint. The wall is 8 ft. high and 16 ft. wide. The window, mirror, and fireplace are not to be painted or papered. The window measures 14 ft. wide and 1 ft. high. The fireplace is 5 ft. wide and 3 ft. high, while the mirror above the fireplace is 4 ft. wide and 2 ft. high. (Note: this drawing is not to scale.)



- a. How many square feet of wallpaper are needed to cover the wall?

Total wall area = 8 ft. × 16 ft. = 128 ft²

Window area = 14 ft. × 1 ft. = 14 ft²

Fireplace area = 3 ft. × 5 ft. = 15 ft²

Mirror area = 4 ft. × 2 ft. = 8 ft²

Net wall area to be covered 128 ft² - (14 ft² + 15 ft² + 8 ft²) = 91 ft²

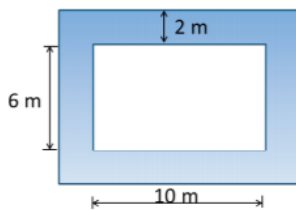
2. A classroom has a length of 30 ft. and a width of 20 ft. The flooring is to be replaced by tiles. If each tile has a length of 3 ft. and a width of 2 ft., how many tiles are needed to cover the classroom floor?

Area of the classroom: 30 ft. × 20 ft. = 600 ft²

Area of each tile: 3 ft. × 2 ft. = 6 ft²

$$\frac{\text{Area of the classroom}}{\text{Area of each tile}} = \frac{600 \text{ ft}^2}{6 \text{ ft}^2} = 100$$

3. A rectangular flower bed measures 10 m by 6 m. It has a path 2 m wide around it. Find the area of the path.



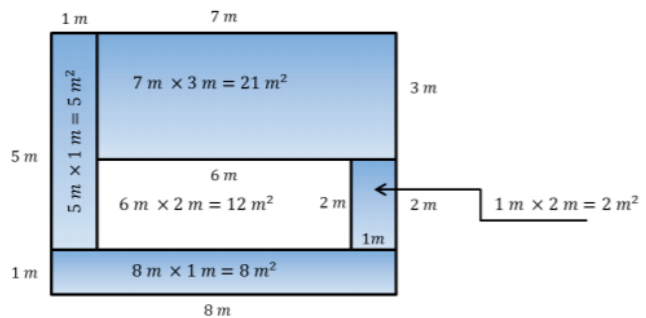
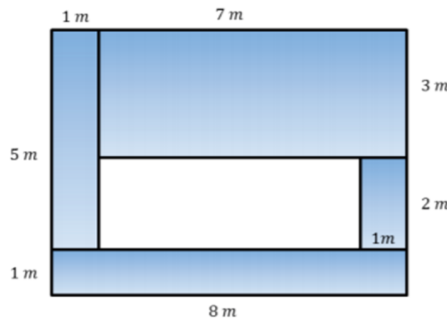
Total area: 14 m × 10 m = 140 m²

Flower bed area: 10 m × 6 m = 60 m²

Area of path: 140 m² - 60 m² = 80 m²

4. A diagram of Tracy's deck is shown below, shaded blue. He wants to cover the missing portion of his deck with soil in order to grow a garden.

Find the area of the missing portion of the deck.



6 m × 2 m = 12 m²

OR

8 × 6 - 7 × 3 - 5 × 1 - 8 × 1 - 2 × 1 = 12 (All linear units are in meters; area is in square meters.)