Name: _____ Class: _____

1. A Stegosaurus skeleton at a museum has a height of 4 meters. The gift shop at the museum sells a model of the Stegosaurus. The scale used to create the model was 1 cm = 0.16 m. What is the height, in centimeters, of the model of the Stegosaurus the gift shop sells?

A 0.04 m **B** 0.064 m **C** 20 cm **D** 25 cm

2. Two students created models of the same building. One student used a scale factor of 3 centimeters = 15 meters. The second student used a scale factor of 4.5 = 15 m. The height of the original building is 20 meters. What is the difference between the heights of the two students' models?

A 1.5 cm **B** 2 cm **C** 6.5 cm **D** 33 cm

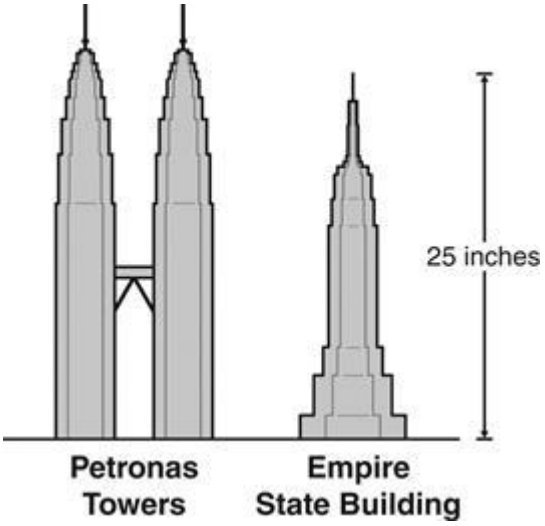
3. The Great Pyramid in Egypt is about 147 meters tall. Rosa is building a scale model of the Great Pyramid using the scale 1 inch = 10 meters. Which of the following proportions can Rosa use to find the height in inches, *x*, that her scale model should be?

A $\frac{x}{10} = \frac{1}{147}$ **B** $\frac{x}{10} = \frac{12}{147}$ **C** $\frac{x}{147} = \frac{1}{10}$ **D** $\frac{x}{147} = \frac{12}{10}$

4. Chris has a miniature model of the boat that he is building. The length of the model is 4.5 inches and the height is 2 inches. If the length of the actual boat is 18 feet, what is the height?

A 8 feet **B** 9 feet **C** 18 feet **D** 36 feet

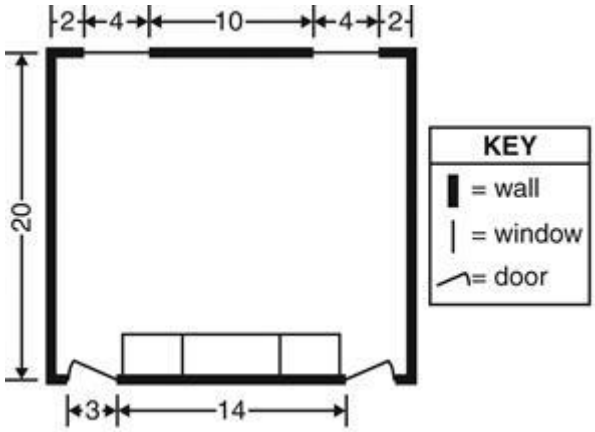
5. José made a scale model to compare the Petronas Towers, which are 1,483 feet tall, to the Empire State Building, which is 1,250 feet tall. In the model, the Empire State Building is 25 inches tall.



How much taller than the model of the Empire State Building is the model of the Petronas Towers, to the nearest 0.1 inch?

A 3.9 inches **B** 4.7 inches **C** 21.1 inches **D** 29.7 inches

6. Stephen will make a scale model of the meeting room pictured below. The measurements given are in feet.



If Stephen will use a scale of $\frac{1}{4}$ inch = 1 foot, which length below should be the length of one of the walls in his drawing?

A 80 inches **B** 20 inches **C** 10 inches **D** 5 inches

7. Marcus will be making a scale model of an experimental aircraft. The actual dimensions of the aircraft are shown in the table.

Experimental Aircraft Dimensions

Dimension	Measurement (feet)
Length	60
Height	15
Wing Span	48

If Marcus uses a length of 10 inches for his scale model, which measurements should he use for the height and wing span, respectively?

A 2.5 inches and 8 inches

B 2.5 inches and 9 inches

C 3.75 inches and 8 inches

D 3.75 inches and 9 inches

8. Sam's table is 12 feet long. A model of the table is 1 foot long. The measures of some other items in Sam's collection are listed.

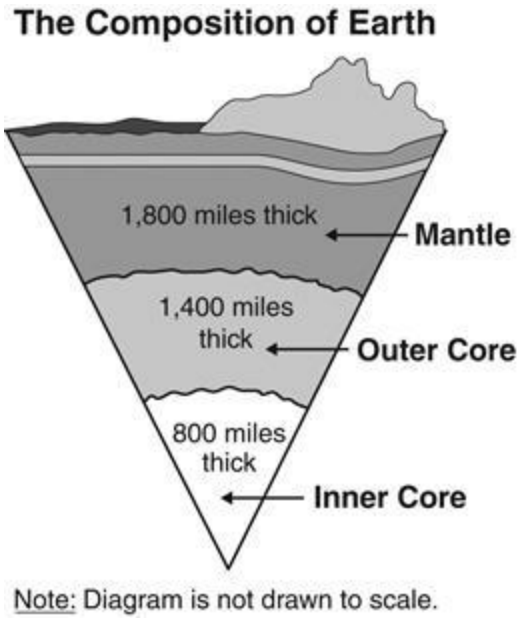
Models

Item	Actual Dimension	Model Dimension
Bed	6 feet long	0.5 feet long
Lamp	3 feet tall	0.5 feet tall
Couch	4 feet long	0.5 feet long
Light Pole	14 feet tall	0.5 feet tall

Which item is made with the same scale factor as the model table?

A Bed **B** Lamp **C** Couch **D** Light Pole

9. The Inner Core, Outer Core, and Mantle are the three largest structural zones of the earth, as shown below.



When making a scale model of the earth, which thicknesses could be used for the Inner Core, Outer Core, and Mantle, respectively?

A 4 inches, 8 inches, 9 inches
B 4 inches, 7 inches, 8 inches
C 2 inches, 3 inches, 4.5 inches
D 2 inches, 3.5 inches, 4.5 inches

10. A scale model of the Washington Monument is 15 inches tall and the base is 1.5 inches wide. If the actual monument is approximately 555 feet tall, which is closest to the width, in feet, of the base?

A 50 **B** 55 **C** 370 **D** 835

11. An architect drew a 1:15 scale model of a building. What statement most accurately describes what 1:15 represents in the drawing?

A The drawing of the building is 15 inches long.
B One-inch on the drawing represents 15 inches of the actual building.
C 15 inches on the drawing represents 115 inches on the actual building.
D The actual building has a wall that measures 15 feet long.