

Scale Drawing Worksheet Answer Key PDF

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Part 1: Building a Foundation

What is a scale drawing?

undefined. A) A drawing that is the same size as the actual object

undefined. B) A drawing that is larger than the actual object

undefined. C) A drawing that is proportionally smaller or larger than the actual object ✓

undefined. D) A drawing that is unrelated to the actual object

A scale drawing is a representation of an object that is proportionally smaller or larger than the actual object.

Which of the following are applications of scale drawings? (Select all that apply)

undefined. A) Maps ✓

undefined. B) Blueprints ✓

undefined. C) Novels

undefined. D) Model designs ✓

Scale drawings are used in various applications such as maps, blueprints, and model designs.

Explain what a scale factor is and how it is used in scale drawings.

A scale factor is a ratio that compares the dimensions of the drawing to the actual object, allowing for accurate representation.

List two tools commonly used to create scale drawings and briefly describe their purpose.

1. Tool 1

Ruler - used for measuring straight lines.

2. Tool 2

Compass - used for drawing circles and arcs.

Common tools include rulers for measuring and compasses for drawing circles.

Part 2: comprehension and Application

If a scale drawing has a scale factor of 1:50, what does this mean?

undefined. A) The drawing is 50 times larger than the actual object

undefined. B) The drawing is 50 times smaller than the actual object ✓

undefined. C) The drawing is the same size as the actual object

undefined. D) The drawing is 1/50th the size of the actual object

A scale factor of 1:50 means the drawing is 50 times smaller than the actual object.

Which statements about proportions in scale drawings are true? (Select all that apply)

undefined. A) Proportions help maintain the integrity of the drawing ✓

undefined. B) Proportions are not necessary for scale drawings

undefined. C) Proportions ensure all parts of the object are scaled equally ✓

undefined. D) Proportions only apply to enlargements

Proportions are essential in scale drawings to ensure accuracy and equal scaling of all parts.

Describe how you would convert a measurement from a scale drawing to the actual size using the scale factor.

To convert a measurement, multiply the measurement in the drawing by the scale factor to find the actual size.

You have a scale drawing of a building with a scale of 1:100. If a wall measures 2 cm on the drawing, how long is the actual wall?

undefined. A) 2 meters

undefined. B) 20 meters ✓

undefined. C) 200 meters

undefined. D) 2000 meters

The actual wall length is 20 meters, as the scale indicates that 1 cm on the drawing equals 1 meter in reality.

Part 3: Analysis, Evaluation, and Creation

What happens to the scale factor if a scale drawing is enlarged?

undefined. A) It remains the same

undefined. B) It becomes less than 1

undefined. C) It becomes greater than 1 ✓

undefined. D) It becomes zero

If a scale drawing is enlarged, the scale factor becomes greater than 1.

Which factors must be considered when analyzing the accuracy of a scale drawing? (Select all that apply)

undefined. A) The scale factor used ✓

undefined. B) The type of paper used

undefined. C) The precision of measurements ✓

undefined. D) The tools used for drawing ✓

Factors include the scale factor used, the precision of measurements, and the tools used for drawing.

Analyze the relationship between scale factor and the size of the drawing. How does changing the scale factor affect the drawing?

Changing the scale factor directly affects the size of the drawing; a larger scale factor results in a larger drawing, while a smaller scale factor results in a smaller drawing.

Design a simple scale drawing of a room in your house. Describe the steps you would take to ensure accuracy and detail in your drawing.

To design a scale drawing, measure the room dimensions, choose an appropriate scale, and accurately represent the features in the drawing.

Evaluate the following statements about scale drawings. Which are correct? (Select all that apply)

undefined. A) Scale drawings can be used to misrepresent size ✓

undefined. B) Accurate scale drawings require precise measurements ✓

undefined. C) Scale drawings are only used in art

undefined. D) Scale drawings help visualize large objects on a smaller scale ✓

Correct statements include that scale drawings can misrepresent size, require precise measurements, and help visualize large objects.