

Apprenticeship Math 12
REVIEW
Unit 3 – Technical Drawings

Name: _____

Date: _____

1. The scale factor for a blueprint of an office is 1:18. If the office on the blueprint is 1.77 m wide, what is the width of the actual office?

2. The Eiffel Tower measures 324 m from base to antenna. If an Eiffel Tower key chain measures 8.1 cm tall, what scale factor was used to produce the key chain (as a fraction)?

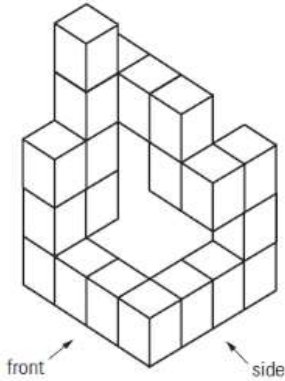
3. A storage locker in an apartment building measures 4.5 m deep. A scale model of the building layout contains a storage locker measuring 3.7 cm deep. Write a scale statement for the model locker.

4. The monkey bars on a playground measure 14.8 ft long. A scale model of the bars measures 8 inches long. Write a scale statement for the model.

5. In a photograph, Lisa and her dog are standing next to a statue. In the photograph, Lisa is 3.9 cm tall and the statue is 6.1 cm tall.
 - a) If Lisa is 147 cm tall in real life, how tall is the statue (rounded to the nearest centimeter)?

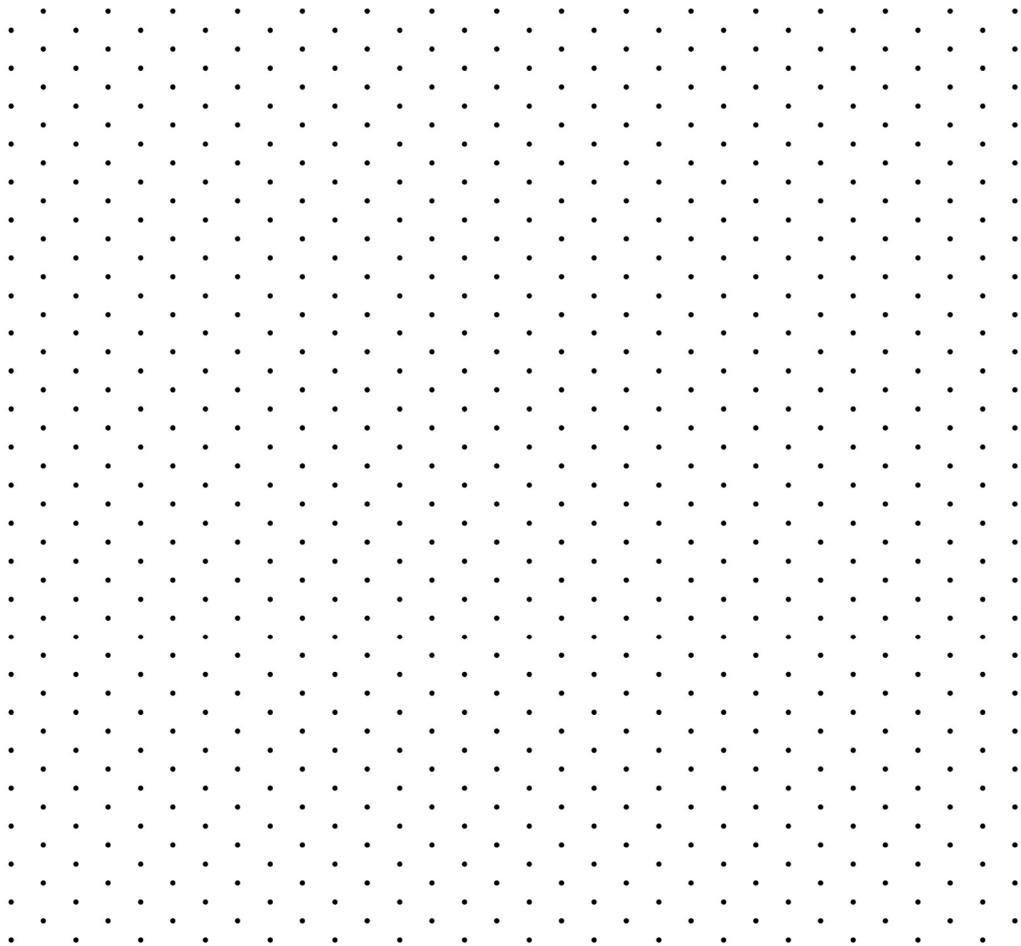
 - b) In real life, Lisa's dog stands 78 cm tall. How tall is the dog in the photograph (in centimeters rounded to the nearest tenth)?

6. Draw the front, top, and side views of these stacked cubes.

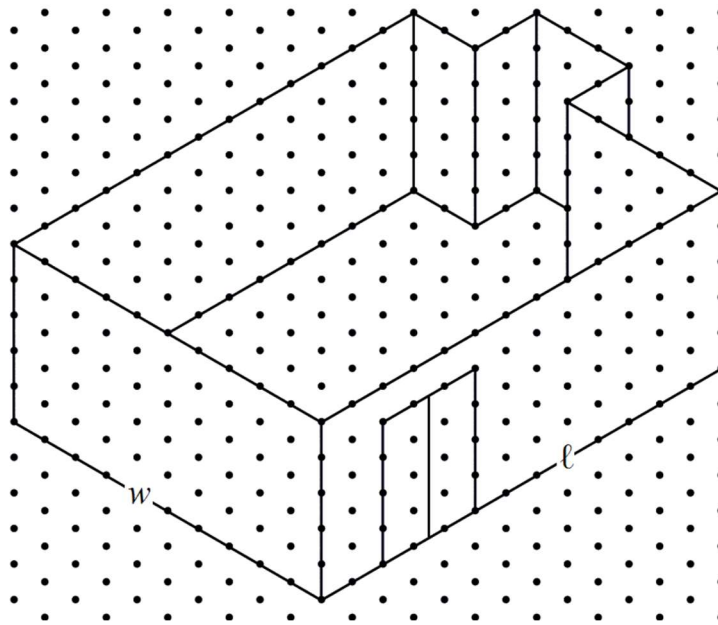


| Top View | Front View | Side View |
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7. A rectangular box has a width of 2.5 cm, a depth of 3 cm, and a height of 2 cm. Draw an isometric drawing of the box. Assume the dots below are 0.5 cm apart.



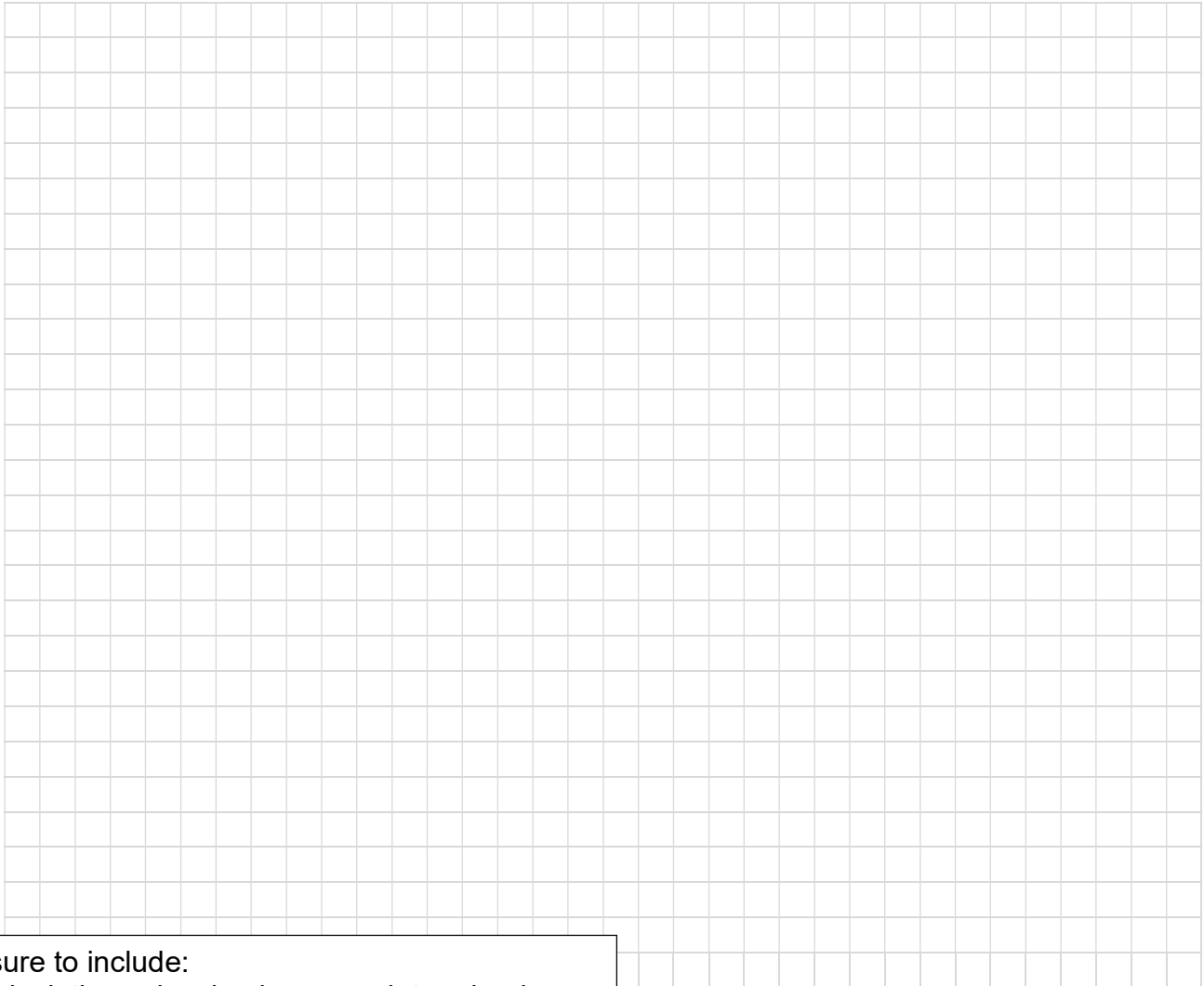
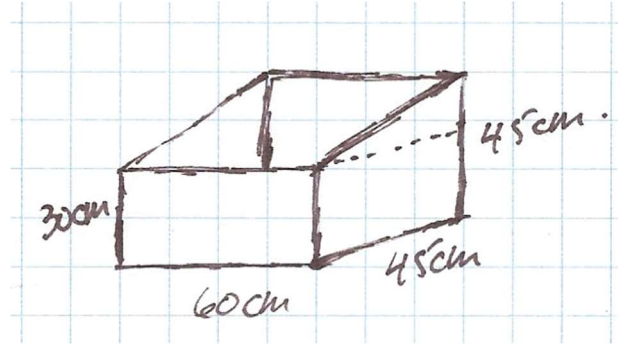
8. The following isometric drawing shows the layout of a living room. The width (w) is 25 ft.



- a) What is the length of the room? _____
- b) What is the width of the door? _____
- c) What is the depth of the closet? _____
- d) What is the perimeter of the room and closet? _____
- e) What is the area of the room (not counting the closet)? _____

9. Brian plans on building an open-top box to hold firewood and kindling for his summer cabin.

From his sketch, draw and label the component parts of the box using a scale of 1:10. You can ignore the thickness of the wood.



Be sure to include:

- calculations showing how you determined your drawing lengths
- a 2-D scale drawing of each component part, including dimensions (actual lengths) and the number needed
- title and scale statement on your drawing

10. As a gift to the school, the graduating class of 2023 has commissioned a “PGSS” sign for the roof of the school.

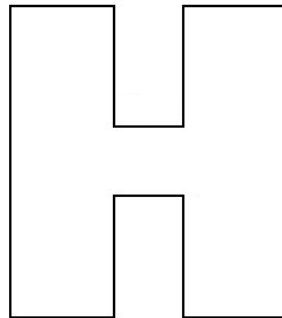
The plans for the sign were drawn at a scale of 1:16.

On the plans, each letter is drawn 34.3 cm wide and 37.5 cm tall

a) How tall will each letter be, to the nearest tenth of a metre? _____

b) How wide will each letter be, to the nearest tenth of a metre? _____

11. Draw a perspective drawing of a prism with the front face, horizon line, and vanishing point (V) given.



1. 31.86 m
2. $\frac{4000}{1}$
3. 37:4500 (or 1:121.6)
4. 5:111 (or 1:22.2)
5. a) 230 cm b) 2.1 cm
8. a) 32.5 ft b) 7.5 ft c) 5 ft d) 125 ft e) 812.5 ft²
10. a) 6.0 m b) 5.5 m