

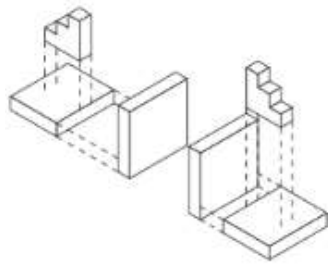
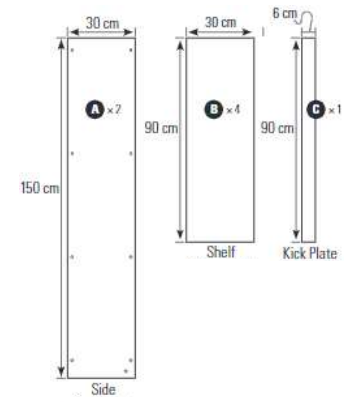
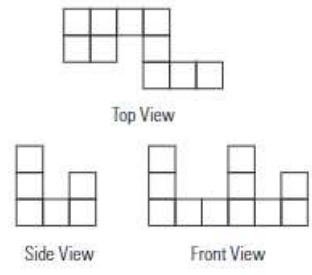
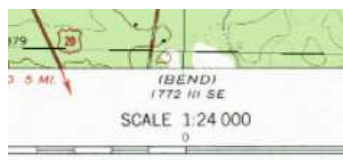
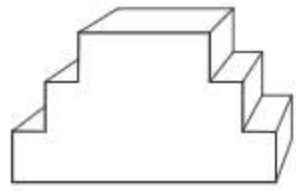
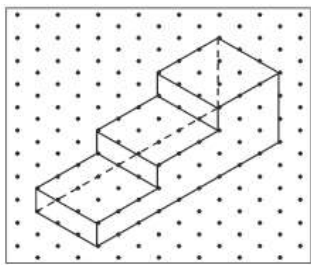
Apprenticeship Math 12
ASSIGNMENT: Technical Drawings Review

Name: _____

Date: _____

1. Match each term with the image that fits best:

- _____ scale statement
- _____ orthographic drawing
- _____ component parts diagram
- _____ isometric drawing
- _____ perspective drawing
- _____ exploded view diagram

<p>A.</p> 	<p>D.</p> 
<p>B.</p> 	<p>E.</p> 
<p>C.</p> 	<p>F.</p> 

2. The scale statement for a blueprint of an office is 1:18. If the actual office is going to be 3.5 m wide, how wide is the office drawn on the blueprint in centimetres? Round your answer to the nearest tenth.

3. A model of a Boeing 747 passenger jet is made on a scale of 1:72.

a) What scale factor was used to create the model? _____

b) If the model has a wingspan of 89.4 cm, what is the wingspan of the actual plane in metres. Round your answer to the nearest tenth. _____

4. 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? _____

5. A storage locker in an apartment building measures 4.81 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 in the form 1: x . _____

6. Charlotte has built a scale model of the cabin she plans to build on her lake-front property. The actual cabin will be 4.5 m wide by 8.6 m long. The model is 15 cm wide.

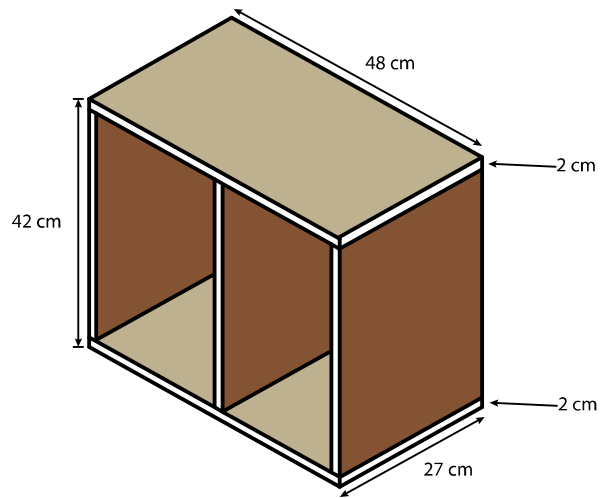
a) What is the scale statement for the model? _____

b) How long is the model of the cabin in centimeters? Round your answer to the nearest tenth. _____

9. Jakob wants to build a stand for storing his work boots. Draw and label a component parts diagram the stand at a scale of 1: 6.

All of the material is 2 cm thick (HINT: this information is needed to calculate the height of some pieces!). The stand is open on the back side.

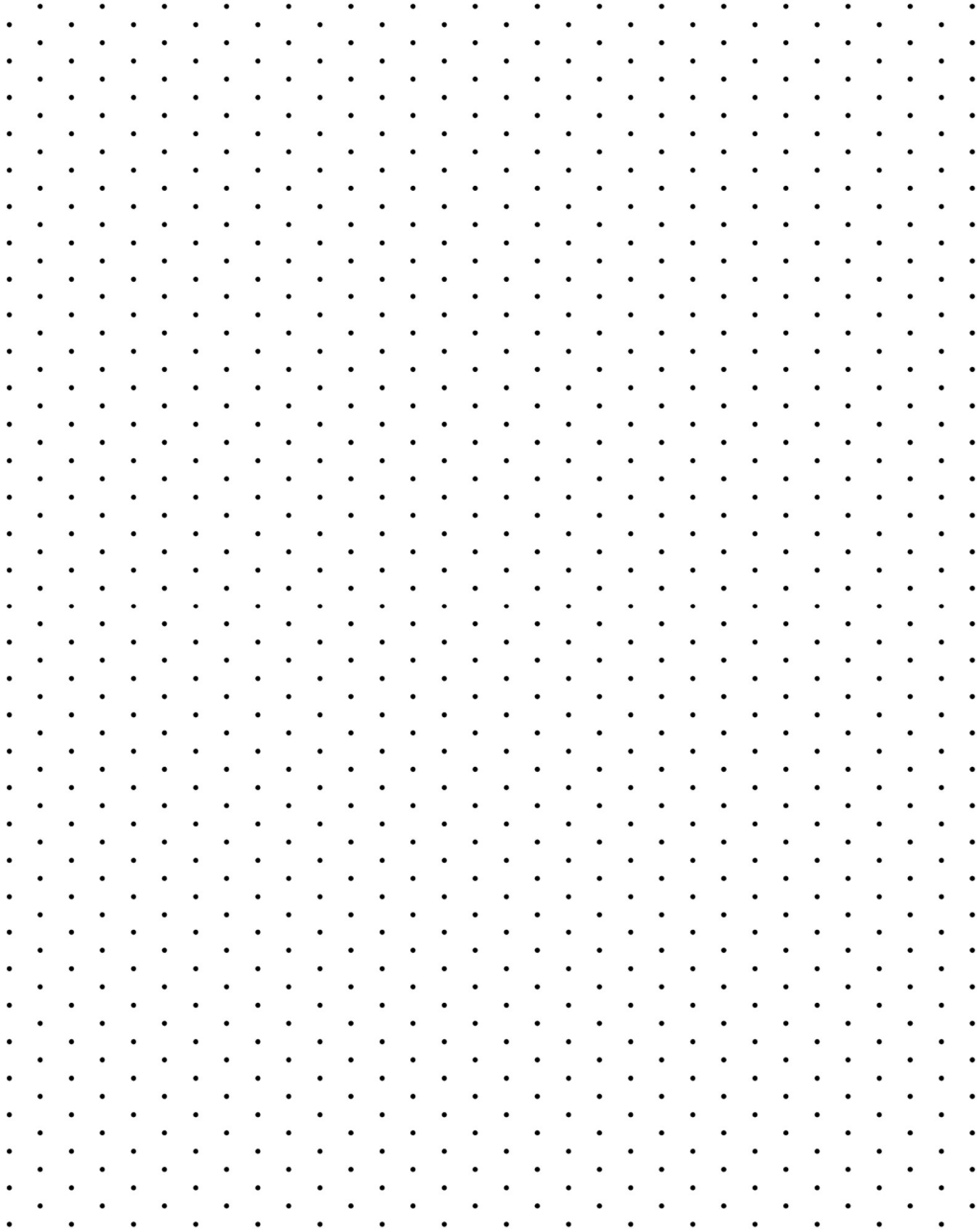
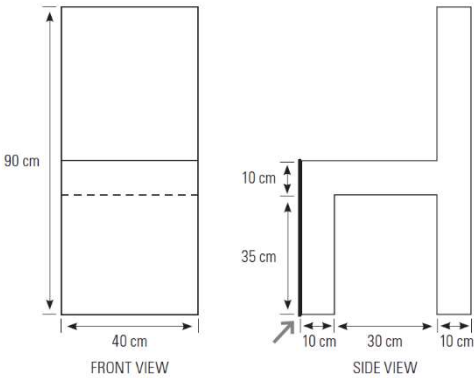
Show how you calculated your measurements, label the actual dimensions, and include a scale statement on your diagram.



A large grid of graph paper for drawing a component parts diagram. The grid consists of 20 columns and 30 rows of small squares.

10. An industrial designer has created a chair made out of concrete for an outdoor recreation area.

Using the isometric dot paper, draw an isometric drawing of the chair at a scale of **1: 10**.



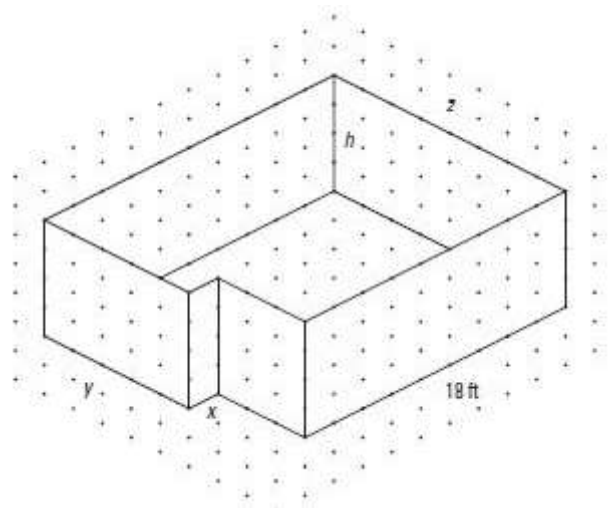
11. In the following isometric drawing of a room, the front wall is 18 feet long.
Find the lengths of walls x, y and z and the height (h) of the room.

x = _____

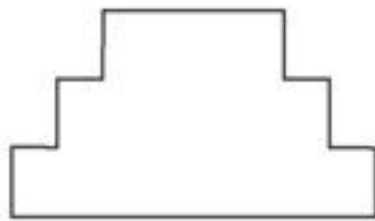
y = _____

z = _____

h = _____



12. Draw a perspective drawing of a prism that has the front face shown. Use the horizon line and vanishing point given.



1. E, B, D, F, C, A

2. 19.4 cm

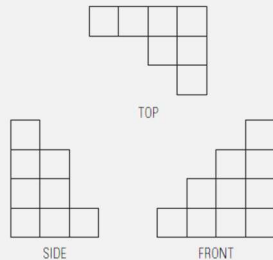
3. a) $\frac{1}{72}$ or $0.013\bar{8}$ b) 64.4 m

4. $\frac{1}{4000}$ or 0.00025

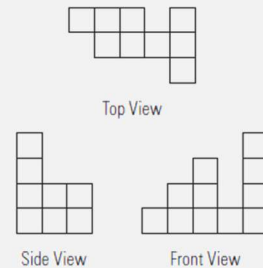
5. 1:130

6. a) 1:30 b) 28.7 cm

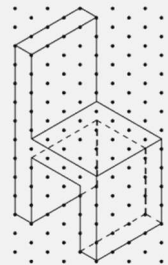
7.



8.



10.



9. TOP/BOTTOM x2 (drawn 8 cm by 4.5 cm), SUPPORTS x3 (drawn 6.3 cm by 4.5 cm)

11. x = 2 ft, y = 10 ft, z = 16 ft, h = 8 ft

12. see question 1 C.