



Noah's Ark Independent Primary School

Subject: Technology	Examiner: Moyo, S.
Type: Summative Term /	Moderator: Matongo, N.
Date: 9 March 2022	Grade: 7-S
Marks: 70 Marks	Time: 1 hour 45 minutes

Name: _____

Instructions

- Read the questions carefully before you start writing.
- Make sure you answer All the questions.
- Write neatly and legibly.

1. Classify the following drawings of two-dimensional or three-dimensional. (6)

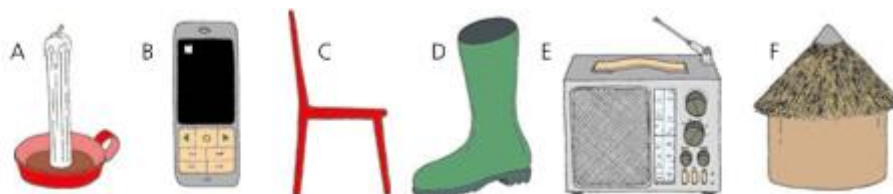


Figure 1: Technology Today Grade 7 Learner's Book, Page 20

Two-dimensional: _____

Three-dimensional: _____

2. Identify the lines (a) to (d) and explain them. (8)

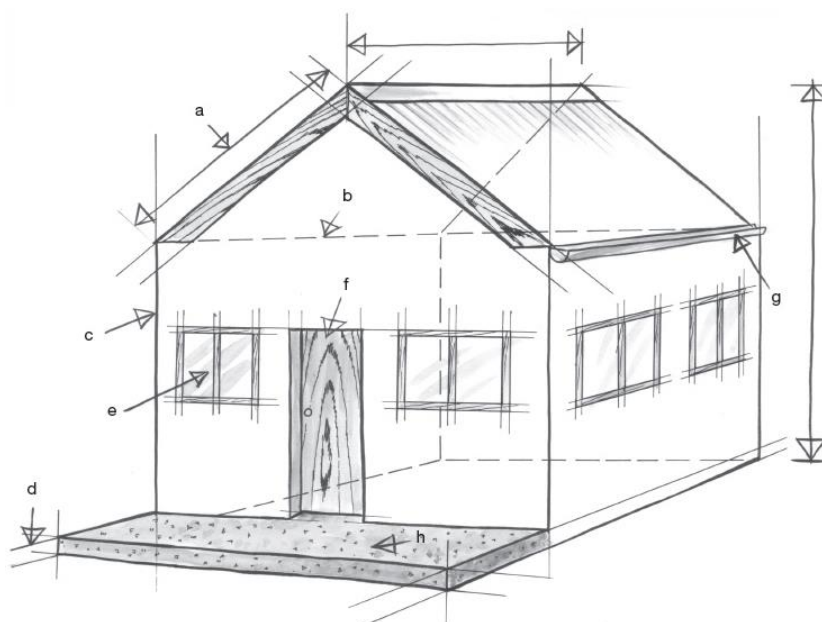


Figure 2: Oxford Successful Technology Grade 7 Learner's Book, Page 33

a. _____

b. _____

c. _____

d. _____

3. Describe the difference between design specifications and design constraints. (4)

4. Your neighbour works long hours and wants to make sure that his dogs have enough water throughout the hot summer days. He wants you to design and make a water dispenser for his dogs.

4.1 Suggest three ways to ensure that the product is safe and will not hurt the dogs. Give reasons for your answers. (9)

4.2 How can you make sure the product does not affect the environment negatively. (3)

5. Use the image below to answer the questions. The cars measurements are in “mm”.

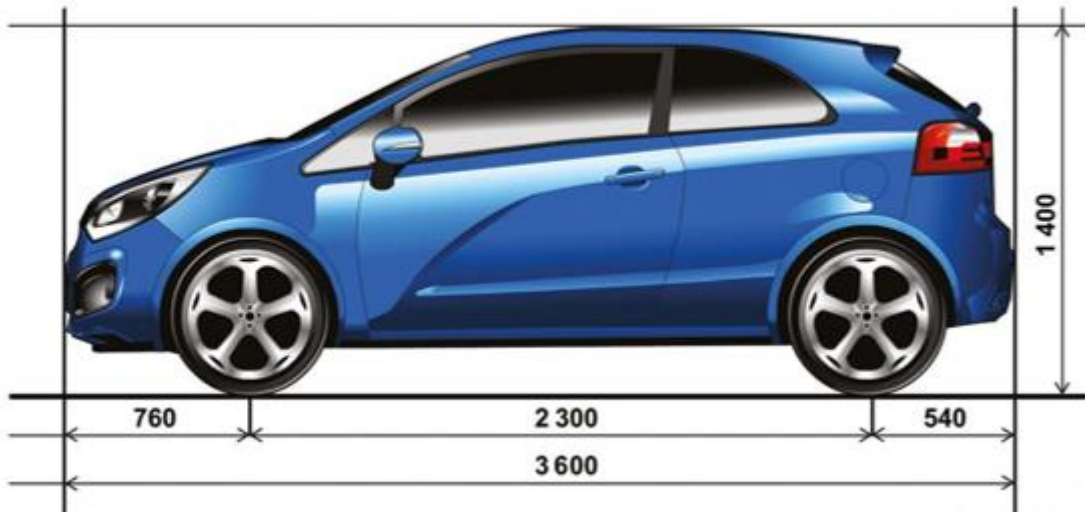


Figure 3: Platinum Technology Grade 7 Learner's Book, Page 16

5.1 What is the actual length of the above car in centimetres (show your calculations) (4)

5.2 Determine the scale that was used to draw the drawing of this car? (4)

5.3 Define scale drawing

(3)

6. Use the figures below to answer the following questions.

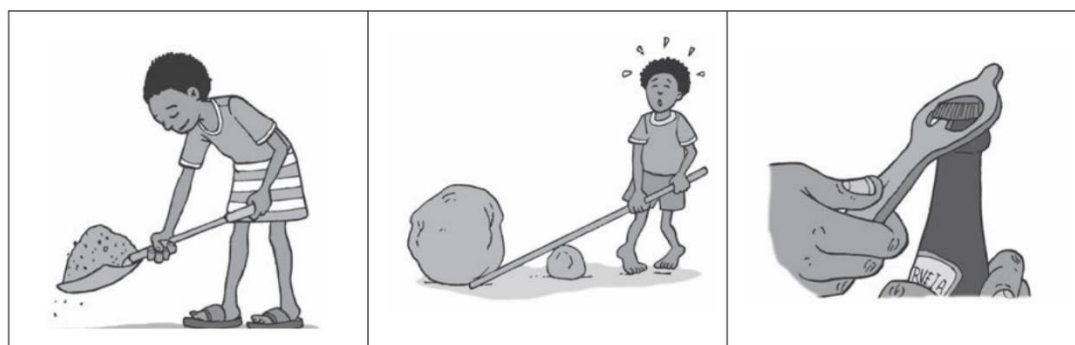


Figure 1: Lever 1

Figure 2: Lever 2

Figure 3: Lever 3

Figure 4: Platinum Remedial and Extension Book, Grade 7: Chapter 3: Target Worksheet B

6.1 Name the lever class for the figures shown above. (3)

Figure 1: -----

Figure 2: -----

Figure 3: -----

6.2 Which of the three levers does not give mechanical advantage. (1)

6.3 Explain mechanical advantage. (1)

7. Peter stays in a village that is too rural. The houses are made of mud and do not have built-in wardrobes and shelves. He has been suffering as his books always get destroyed by termites. Being a Grade 7 learner, who now knows about technology, Peter asks

you to make him a book shelf. The books shelf should have three layers. It should be 40 cm wide, 60 cm long and its height should be 100cm. The shelf should be strong enough to accommodate books in all three layers without falling apart.

7.1 Write down how Peter's design brief would look like. (4)

7.2 List down the design specifications of the bookshelf. (3)

7.3 Name any three (3) design constraints available. (3)

7.4 At what degrees should the corners be projected when drawing a 3-D oblique drawing. (1)

7.5 Using a scale of 1:10 draw a 3-D oblique diagram of the shelf.

Criteria	Possible Marks	Actual Marks
Heading	1	
Scale indicated	1	
Construction lines shown	1	
Hidden lines shown	1	
Outlines are dark	1	
Dimension lines with actual measurements	2	
Neatness	1	
Total	8	

8. Give a term for the following explanations. (2)

8.1 A system that uses the power of compressed air to make things move. _____

8.2 A system that uses liquids under pressure to give mechanical advantage to do tasks. _____

9. What type of system is named in question 8.1? (1)

10. Explain what the “communicate” stage of the design process actually includes. (2)

_____ / 70 Marks