

DESIGN AND TECHNOLOGY BASELINE TEST - MARKING SCHEME

WORLD ASSOCIATION OF TECHNOLOGY TEACHERS

<https://www.facebook.com/groups/254963448192823/>

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SURNAME

This test paper, should be set for pupils entering secondary school, within the first month of the start the course.

FORENAME(S)

Design and Technology Departments, will need to develop a scale, so that the marks awarded for the paper, can be converted to match the marking and assessment policy of the school (e.g. 0 to 9 grading system).

SCHOOL

GROUP TEACHER

30 MINUTES ALLOWED

Equipment required for this examination:

Computer Access
PowerPoint software

Instructions to candidates:

- Answer **all** questions.
- You must answer the questions in the spaces provided.

Information

- The marks for each question are displayed.
- The maximum mark for this paper is 41.

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MEASUREMENTS IN CMs AND MMs

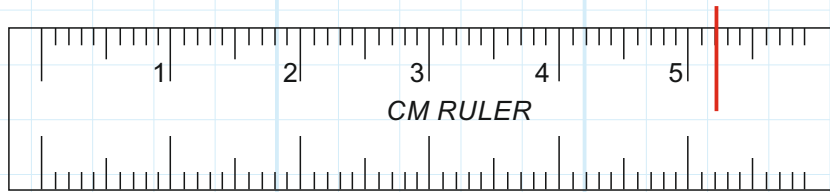
EXAMPLE ANSWER

1. The ruler below has a centimetre scale. Mark a line on 34mm



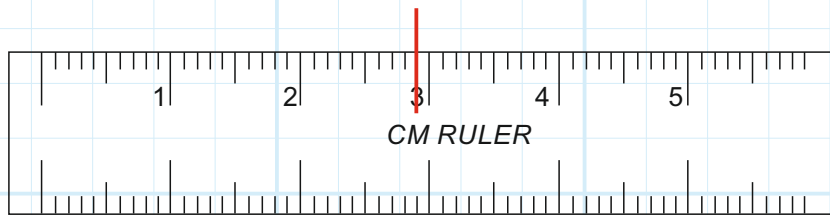
1 mark

1a. The ruler below has a centimetre scale. Mark on 52mm



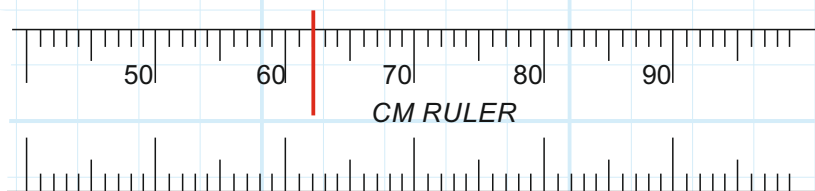
1 mark

1b. The ruler below has a centimetre scale. Mark on 29mm



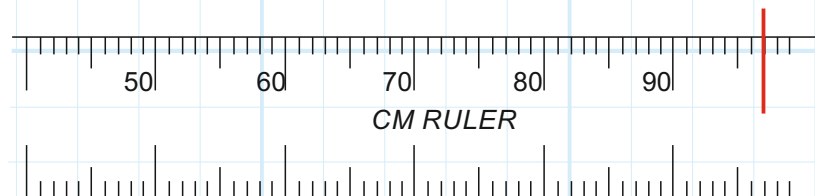
1 mark

1c. The ruler below has a millimetre scale. Mark on 62mm



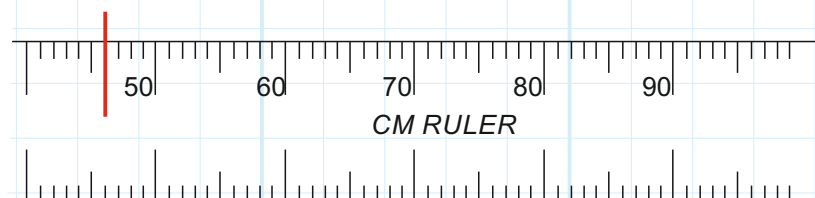
1 mark

1d. The ruler below has a millimetre scale. Mark on 97mm



1 mark

1e. The ruler below has a millimetre scale. Mark on 46mm



1 mark

2a. When a product breaks or becomes faulty, we often throw it away. Sometimes broken products are recycled.
What is 'recycling? Describe an example of recycling.

4 marks

1 mark for a basic understanding of the term recycling, with no example.

2 marks for a basic understanding and a simple example.

3 marks for the display of more detailed knowledge of recycling (teacher discretion)

4 marks for a good understanding of recycling with a more detailed description of an example.

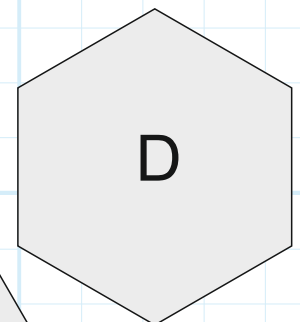
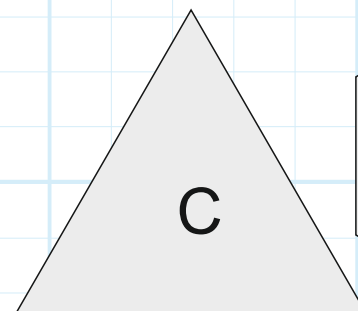
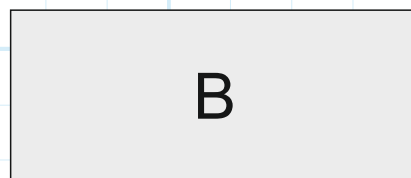
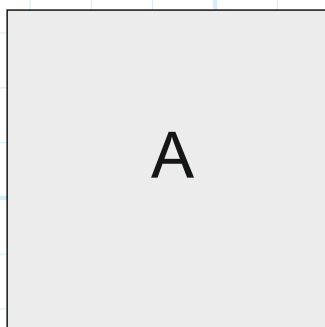
2b. What does a 'designer' do? **2 marks**

1 mark for a simplistic understanding of the role of a designer.

2 marks for greater understanding of the role of a designer.

3. Name the shapes shown below. **4 marks**

1 mark per correct answer



A=

C=

B=

D=

PICTURE INSERT FOR QUESTION 4

A

LOTUS SPORT



B

RALEIGH 'CHOPPER'



C

WALKING MACHINE



ANALYSING A PRODUCT

4a. Which of the bicycles A, B or C is the oldest? LETTER: _____
(1 mark)

Why do you think it is the oldest? (3 marks)

1 mark for the correct identification of 'C', as the oldest bicycle.

1 additional mark for limited reasoning.

2 additional marks for a reasonable explanation

3 additional marks awarded for a well reasoned and explained answer.

PLEASE NOTE: even if the wrong bicycle is identified as the oldest, up to 3 marks can be awarded for the reasoning, if detailed and well justified.

4b. Which of the bicycles A, B or C is the most interesting. LETTER: _____
(1 mark)

Why do you think it is the most interesting? (3 marks)

1 mark for a bicycle being identified.

1 additional mark for limited reasoning.

2 additional marks for a reasonable explanation.

3 additional marks awarded for a well reasoned and explained answer.

4c. Describe ONE improvement you could make to ONE of the bicycles.
(4 marks)

LETTER: _____

1 mark for identifying a bicycle.

1 additional mark for limited description.

2 additional marks for a reasonable description, of a realistic improvement.

3 additional marks awarded for a detailed description of a realistic improvement.

CALCULATING

(Calculators permitted)

INSTRUCTIONS: In the shaded boxes are example questions and answers. You must answer the questions in the unshaded boxes.

RATIOS - YOUR EXAMPLE QUESTION AND ANSWER

An example of a ratio is:

4:1

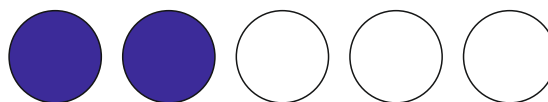


Here we see 4 shaded circles compared to 1 unshaded circle.

5a. YOUR QUESTION (4 marks)

2:3

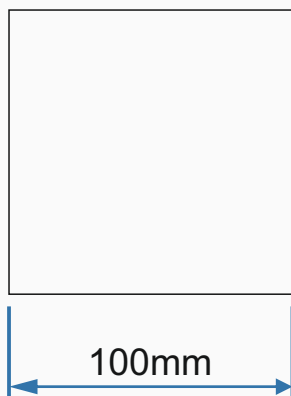
2 marks



Here we see 2 blue circles compared to 3 red circles.

2 marks

AREAS - YOUR EXAMPLE QUESTION AND ANSWER



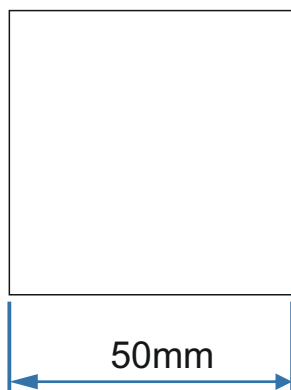
Calculate the area of the square shown opposite. The length of one side is 100mm

$$\text{AREA} = X^2$$

$$\text{AREA} = 100\text{mm} \times 100\text{mm}$$

$$\text{AREA} = 10000\text{mm}^2$$

5b. YOUR QUESTION (4 marks)



Calculate the area of the square shown opposite. The length of one side is 50mm

$$\text{AREA} = X^2$$

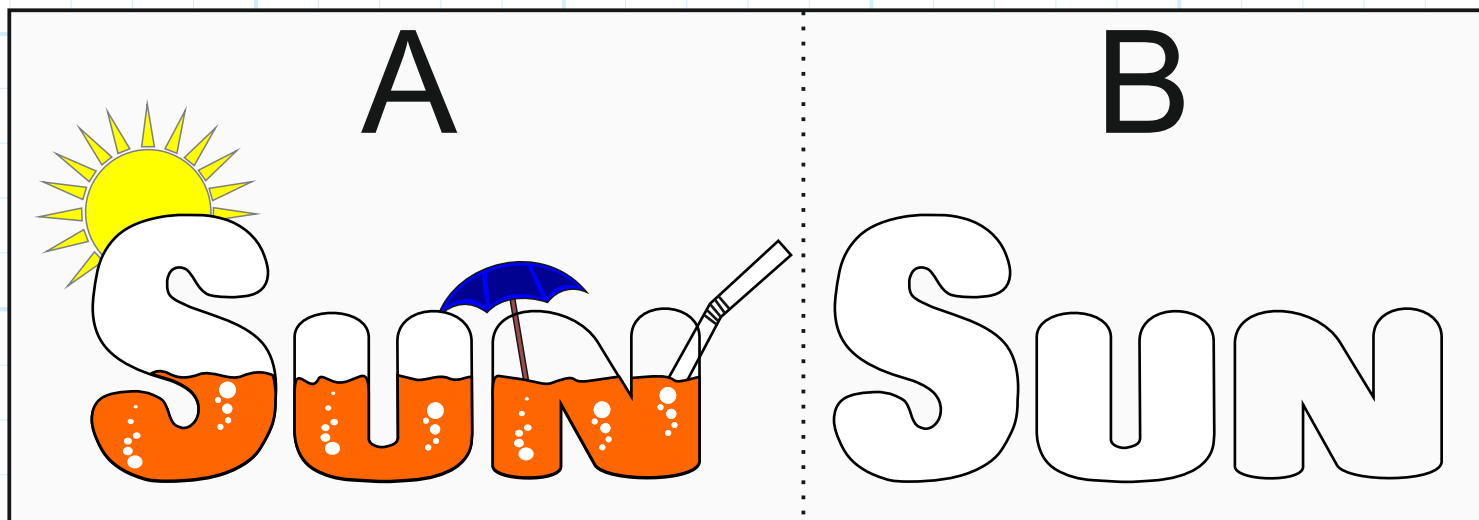
$$\text{AREA} = 50\text{mm} \times 50\text{mm} \quad 2 \text{ marks}$$

$$\text{AREA} = 2500\text{mm}^2 \quad 2 \text{ marks}$$

DESIGN AND IMAGINATION

Two presentations of the word 'SUN' are shown below.

'A' includes illustrations that reflect sunny days and holidays. 'B' is a plain presentation of the word.



6a. Which presentation of the word 'Sun' do you like and why do you like it?

3 marks

*1 mark for one reason for 'liking' the illustrated / plain word.
2 marks for two reasons for 'liking' the illustrated / plain word.
3 marks for three reasons for 'liking' the illustrated / plain word.*

6a. Why do you think the images have been added to the word 'sun'?

3 marks

1 mark for each comment (3 marks maximum)

e.g. The images reflect the meaning of the word. The colour make the word more attractive and interesting. The colour and images attract attention etc.....