BRITISH COUNCIL

CBSE

Competency-based education for CBSE

Item Bank:

Maths Class 6

September 2021

Content created by AlphaPlus

Introduction for teachers

A bank of resources has been created to support teachers to develop and administer end-of-class tests. These resources should be used together. You can view and download the following resources from http://cbseacademic.nic.in

- Learning ladder for maths
- Assessment specification for maths
- Sample lesson plans

This document is a compilation of the sample items for maths class 6. There are 58 items.

This item bank is supported by the assessment specification which sets out the end-of-class assessment requirements and the learning ladder for the subject which maps the CBSE syllabi content to the NCERT curriculum. The item index (page X) shows how each item maps to the learning ladder content and the assessment objectives.

What these assessment items can be used for

You can use the bank of questions in whatever way you wish but three main purposes have been identified:

- Create end-of-class assessments using the items from the bank to meet the requirements set out in the assessment specifications.
- Create end-of-topic tests using the items from the bank for when you finish teaching a topic.
- Use individual or groups of questions from the bank to create or add to worksheets for use in class and for homework.

What is in this document

You will find linked questions and single questions which cover different aspects of the learning ladder content and different assessment objectives. You can use these questions to create your own assessments.

Each item in this document begins with the metadata (see Figure 1). The metadata gives details of the content, assessment objective coverage and the number of marks.

There is then a section showing any source material needed followed by the questions themselves and finally the mark scheme for the questions.

Item identity	AO1 marks	AO2 marks	C/N/E*	Content reference from the learning ladder	Marks
Maths6AS1	1		N	6A1a Form and use algebraic expressions (up to 2 variables, including use of brackets)	1

*C = Calculator required, N = Calculator not allowed, E = Either

Figure 1: Example of metadata

How to use the assessment items

You can peruse the bank of items by flicking through this document and selecting questions you wish to use. However, if you are assessing specific content then you can use the learning ladder to identify this content and then use the item index (page 6) to find any items which cover that content.

Please note that not all of the content will have items. The item bank is only a sample of the questions which could be created so it may be necessary for you to write questions of your own to fill gaps.

When you find a relevant assessment item in this document, you can copy and paste the question(s) and any source material into a new Word document which will form the assessment or worksheet. Other questions from the bank can be copied and pasted to this document and an assessment or worksheet covering a range of items created. The questions can then easily be edited in the new document using Word and you can add any questions you write to best meet the needs of your classes.

Once the questions have been pasted into the new document the numbering of the items can be changed so that they run through 1, 2 etc. There should be no need to change the numbering of parts (a), (b) etc unless a question has been deleted.

You can create the mark schemes in the same way by copying the relevant section of the item documents and pasting them into a separate Word document which will form the mark scheme. Again, the question numbering will need to be amended. You can use these mark schemes to make sure that the marking is standardised, particularly if more than one teacher uses the assessment.

When creating an end-of-class test the teacher should use the assessment specification to identify the number of marks and questions needed, the balance of content to be covered and the weighting of the assessment objectives needed. You can then select items from the bank to build a test that meets the assessment specification and then order these in a logical manner so that it allows the students to work through the assessment. You should also add a front page with the assessment name and details of the number of marks and the length of the assessment. Again, the mark scheme can be created at the same time and question numbers will need to be amended.

When copying items from the bank care needs to be taken to keep the format and style of the items consistent including the spacing and layout and ensuring that the number of marks available for each question is clearly linked to the question.

Assessment objectives

This document sets out the assessment objectives for CBSE mathematics and their percentage weighting for the CBSE end of year tests for the different classes from VI to X.

		Class				
No.	**Description of Assessment Objective**	**VI**	**VII**	**VIII**	**IX**	**X**
AO1	Demonstrate knowledge and understanding of mathematical ideas, techniques and procedures.	50 - 65	50 - 65	50 - 65	40 - 55	40 - 55
AO2	Apply knowledge and understanding of mathematical ideas, techniques and procedures to classroom and real world situations	35 - 50	35 - 50	35 - 50	45 - 60	45 - 60

Demonstrate knowledge and understanding of mathematical ideas, techniques and procedures.

Students should be able to recall and apply mathematical knowledge, terminology and definitions to carry out routine procedures or straightforward tasks requiring single or multi-step solutions in mathematical or everyday situations. At appropriate class levels this would include:

- working accurately with information presented in words, tables, graphs and diagrams
- using and interpreting mathematical notation correctly
- using a calculator to perform calculations where appropriate
- understanding and using systems of measurement in everyday use
- estimating, approximating and working to appropriate levels of accuracy, and converting between equivalent numerical forms
- using geometrical instruments to measure and to draw to appropriate levels of accuracy
- recognising and using spatial relationships in two and three dimensions

Apply knowledge and understanding of mathematical ideas, techniques and procedures to classroom and real-world situations.

Students should be able to reason, interpret and communicate mathematically when solving problems. They should be able to analyse a problem, select a suitable strategy and apply appropriate techniques. At appropriate class levels this would include:

- presenting arguments and chains of reasoning in a logical and structured way
- assessing the validity of an argument
- interpreting and communicating information accurately, and changing from one form of presentation to another

- solving unstructured problems by putting them into a structured form
- recognising patterns in a variety of situations and forming generalisations
- applying combinations of mathematical skills and techniques using connections between different areas of mathematics
- making logical deductions, making inferences and drawing conclusions from given mathematical information, including statistical data
- interpreting results in the context of a given problem

Note: proportions for these AOs are presented as ranges. We suggest that the initial balance might use the high end of AO1 with the low end of AO2, moving over time towards increasing the proportion of AO2 over time as the new pedagogical approach is embedded.

Item Index

Assessment content	Assessment topic	Filename	Question ID	AO1	AO2
6A1a	Algebra	Maths6AS1	Maths6AS1	1	
6A1a	Algebra	Maths6AS5	Maths6AS5	1	
6A1a	Algebra	Maths6AT2	Maths6AT2	1	
6A1a	Algebra	Maths6MG3	Maths6MG3	1	
6A1a	Algebra	Maths6MG4	Maths6MG4a	1	
6A1a	Algebra	Maths6MG4	Maths6MG4b	2	
6G1a	Geometry	Maths6SB8	Maths6SB8a	1	
6G1b	Geometry	Maths6HK1	Maths6HK1	1	
6G1b	Geometry	Maths6SB5	Maths6SB5	1	
6G1c	Geometry	Maths6SB8	Maths6SB8c		2
6G1d	Geometry	Maths6GK6	Maths6GK6b	2	
6G1d	Geometry	Maths6GK6	Maths6GK6c	1	
6G1e	Geometry	Maths6GK6	Maths6GK6a	1	
6G1e	Geometry	Maths6SB4	Maths6SB4	1	
6G2a	Geometry	Maths6SB8	Maths6SB8b		2
6G2c	Geometry	Maths6GK5	Maths6GK5a	1	
6G2c	Geometry	Maths6GK5	Maths6GK5b		2
6G3a	Geometry	Maths6GK1	Maths6GK1	1	
6G3a	Geometry	Maths6HK5	Maths6HK5	1	
6G3a	Geometry	Maths6SB3	Maths6SB3	1	
6M1a	Mensuration	Maths6AJ2	Maths6AJ2		1
6M1a	Mensuration	Maths6AJ6	Maths6AJ6b		2
6M1a	Mensuration	Maths6AJ7	Maths6AJ7b	2	
6M1a	Mensuration	Maths6HK7	Maths6HK7b	2	
6M1a	Mensuration	Maths6KK3	Maths6KK3	2	
6M1a	Mensuration	Maths6KK4	Maths6KK4b	2	
6M1a	Mensuration	Maths6KK5	Maths6KK5b		2
6M1a	Mensuration	Maths6RB3	Maths6RB3		2
6M1a	Mensuration	Maths6RB5	Maths6RB5a		2
6M1a	Mensuration	Maths6RB5	Maths6RB5b		2
6M1a	Mensuration	Maths6RB5	Maths6RB5c		2
6M1a	Mensuration	Maths6RB6	Maths6RB6a		2
6M2a	Mensuration	Maths6AJ7	Maths6AJ7c	3	
6M2a	Mensuration	Maths6HK7	Maths6HK7a	2	
6M2a	Mensuration	Maths6KK4	Maths6KK4a	2	
6M2a	Mensuration	Maths6KK5	Maths6KK5a		2
6M2a	Mensuration	Maths6RB6	Maths6RB6b		2

6N1a	Number systems	Maths6GK2	Maths6GK2	1	
6N1a	Number systems	Maths6KK2	Maths6KK2		1
6N1a	Number systems	Maths6SB7	Maths6SB7a	1	
6N1b	Number systems	Maths6AJ7	Maths6AJ7a	1	
6N1b	Number systems	Maths6HK3	Maths6HK3	1	
6N1b	Number systems	Maths6KK1	Maths6KK1	1	
6N1b	Number systems	Maths6MG1	Maths6MG1	1	
6N1b	Number systems	Maths6RB2	Maths6RB2	1	
6N1c	Number systems	Maths6RB4	Maths6RB4b	1	
6N1c	Number systems	Maths6RB4	Maths6RB4c	2	
6N1e	Number systems	Maths6AJ5	Maths6AJ5		1
6N1e	Number systems	Maths6AS4	Maths6AS4	1	
6N1e	Number systems	Maths6AT3	Maths6AT3	1	
6N1e	Number systems	Maths6RB1	Maths6RB1		2
6N1e	Number systems	Maths6SB7	Maths6SB7b		2
6N2a	Number systems	Maths6AS2	Maths6AS2	1	
6N2a	Number systems	Maths6AT1	Maths6AT1	1	
6N2a	Number systems	Maths6HK2	Maths6HK2	1	
6N2a	Number systems	Maths6HK6	Maths6HK6a		1
6N2a	Number systems	Maths6HK6	Maths6HK6b		2
6N2a	Number systems	Maths6HK6	Maths6HK6c		2
6N2a	Number systems	Maths6MG5	Maths6MG5a	1	
6N2b	Number systems	Maths6AJ1	Maths6AJ1		1
6N2b	Number systems	Maths6AS3	Maths6AS3	1	
6N2b	Number systems	Maths6AT7	Maths6AT7b		2
6N2c	Number systems	Maths6MG5	Maths6MG5b	1	
6N2c	Number systems	Maths6MG5	Maths6MG5c	1	
6N2c	Number systems	Maths6SB2	Maths6SB2	1	
6N3b	Number systems	Maths6AT4	Maths6AT4	1	
6N3b	Number systems	Maths6SB1	Maths6SB1	1	
6N3c	Number systems	Maths6AJ6	Maths6AJ6a		1
6N3c	Number systems	Maths6KK4	Maths6KK4c	2	
6N3d	Number systems	Maths6HK4	Maths6HK4	1	
6N3d	Number systems	Maths6RB4	Maths6RB4a	1	
6N3e	Number systems	Maths6AJ3	Maths6AJ3	1	
6N3e	Number systems	Maths6GK3	Maths6GK3	1	
6N3g	Number systems	Maths6KK6	Maths6KK6a	2	
6N3g	Number systems	Maths6KK6	Maths6KK6b	2	
6N4a	Number systems	Maths6AS6	Maths6AS6a	2	
6N4a	Number systems	Maths6AT7	Maths6AT7a	2	
6N4b	Number systems	Maths6AJ4	Maths6AJ4		1

6N4b	Number systems	Maths6SB6	Maths6SB6		2
6N4c	Number systems	Maths6AS6	Maths6AS6b	3	
6N4c	Number systems	Maths6GK4	Maths6GK4a	1	
6N4c	Number systems	Maths6GK4	Maths6GK4b		2
6N4c	Number systems	Maths6MG2	Maths6MG2		1
6S1a	Statistics and probability	Maths6AS7	Maths6AS7a		3
6S1a	Statistics and probability	Maths6AS7	Maths6AS7b	1	
6S1a	Statistics and probability	Maths6AS7	Maths6AS7c	1	
6S2a	Statistics and probability	Maths6AT5	Maths6AT5		1

Maths6AS1

Item identity	AO1 marks	AO2 marks	C/N/E*	Content reference from the learning ladder	Marks
Maths6AS1	1		N	6A1a Form and use algebraic expressions (up to 2 variables, including use of brackets)	1

*C = Calculator required, N = Calculator not allowed, E = Either

Item purpose

The question assesses the students' ability to form algebraic expressions.

Sources and diagrams

Source information if copied: book/journal, author, publisher, website link etc.

Question

1 The length and breadth of a rectangle are x cm and y cm respectively. Find the perimeter of rectangle.

A. 2x + y
B. 2y + x
C. 2(x + y)
D. 2(x – y)

(1 mark)

(Total marks 1)

Mark scheme

1 The length and breadth of a rectangle are x cm and y cm respectively. Find the perimeter of rectangle.

A. 2x + y
B. 2y + x
C. 2(x + y)

D. 2(x – y)	
Answer	Guidance
C. 2(x + y)	1 MARK A1 1 Allow 1 mark for correct answer

Maths6AS5

Item identity	AO1 marks	AO2 marks	C/N/E*	Content reference(s) from the learning ladder	Marks
Maths6AS5	1		N	6A1a Form and use algebraic expressions (up to 2 variables, including use of brackets)	1

*C = Calculator required, N = Calculator not allowed, E = Either

Item purpose

The question assesses the students' ability to form algebraic expressions.

Sources and diagrams

Source information if copied: book/journal, author, publisher, website link etc.

Question

1 Cary is four years older than thrice her daughter's age. How old is Cary in terms of her daughter's age? Use x for the age of her daughter.

A. 3x +4
B. 3(x+4)
C. 4x +3
D. 4(x + 3)

(1 mark)

Mark scheme

1 Cary is four years older than thrice her daughter's age. How old is Cary in terms of her daughter's age, considering the age of her daughter is x years or to be x years?

A. 3x +4
B. 3(x +4)
C. 4x +3
D. 4(x + 3)

Answer	Guidance
A. 3x + 4	1 mark A1 1 Allow 1 mark for correct answer

Maths6AT2

Item identity	AO1 marks	AO2 marks	C/N/E	Content reference(s) from the learning ladder	Marks
Maths6AT2	1		E	6A1a Form and use algebraic expressions (up to 2 variables, including use of brackets)	1

Item purpose

The question assesses formation of algebraic expressions using statements.

Source:

Source information: book/journal, author, publisher, ISBN, website address etc.

Question(s)

1 Arunima thinks of a number ‘a’. She multiplies the number by -7 and subtracts it from 12.

Choose the algebraic expression for this statement:

A. 12 - 7a
B. 12 + 7a
C. -7a - 12
D. -7a + 12

(1 mark)

(Total marks 1)

Mark scheme

1 Arunima thinks of a number ‘a’. She multiplies the number by - 7 and subtracts it from 12. Write the algebraic expression for this statement.

A. 12 – 7a B. 12 + 7a C. – 7a - 12 D. – 7a + 12	
Answer	Guidance
B. 12 + 7a	1 mark for correct answer only

Maths6MG3

Item identity	AO1 marks	AO2 marks	C/N/E*	Content reference(s) from the learning ladder	Marks
Maths6MG3	1		E	6A1a Form and use algebraic expressions up to 2 variables, including use of brackets	1

*C = Calculator required, N = Calculator not allowed, E = Either

Item purpose

The question assesses uses variable with different operations to generalise a given situation

Source(s)

Source information: book/journal, author, publisher, website link etc.

Question(s)

1 A basket holds 12 oranges. Write the total number of oranges in terms of

Use *b* for the number of baskets.

(1 mark)

(Total marks 1)

Mark scheme

1 There are 12 oranges in a basket, how will you write the total number of Oranges in terms of the number of baskets? (Use “h” for the number of baskets)	
Answer	Guidance
12h	Allow 1 mark for 12× h OR 12h”

Maths6MG4

Item identity	AO1 marks	AO2 marks	C/N/E*	Content reference(s) from the learning ladder	Marks
Maths6MG4a	1		N	6A1a Form and use algebraic expressions up to 2 variables, including use of brackets	1
Maths6MG4b	2		N	6A1a Form and use algebraic expressions up to 2 variables, including use of brackets	2
Total marks	**3**				**3**

*C = Calculator required, N = Calculator not allowed, E = Either

Item purpose

The question assesses to uses variable with different operations to generalize a given situation.

Source(s)

Source information: book/journal, author, publisher, website link etc.

Question(s)

1 A boy is walking around a rectangular garden which is of length 'a' metres and the breadth 'b' metres. He walks around the garden 3 times each day.

1 (a) What is the perimeter of the garden?

(1 mark)

1 (b) If the breadth b is 5 metres how long does he walk each day?

(2 marks)

(Total 3 marks)

Mark scheme

1 (a) What is the perimeter of the garden?	
Answer	Guidance
2(a+b)	Allow 1 mark for "2(a+b) "or Allow 1 mark for 2a+2b
1 (b) If the breadth b is 5 metres how long does he walk each day?	
Answer	Guidance
6(a+5) m	M1 3 x 2(a+5) A2 6(a+5) or 6a+ 30 (metres)

Maths6SB8

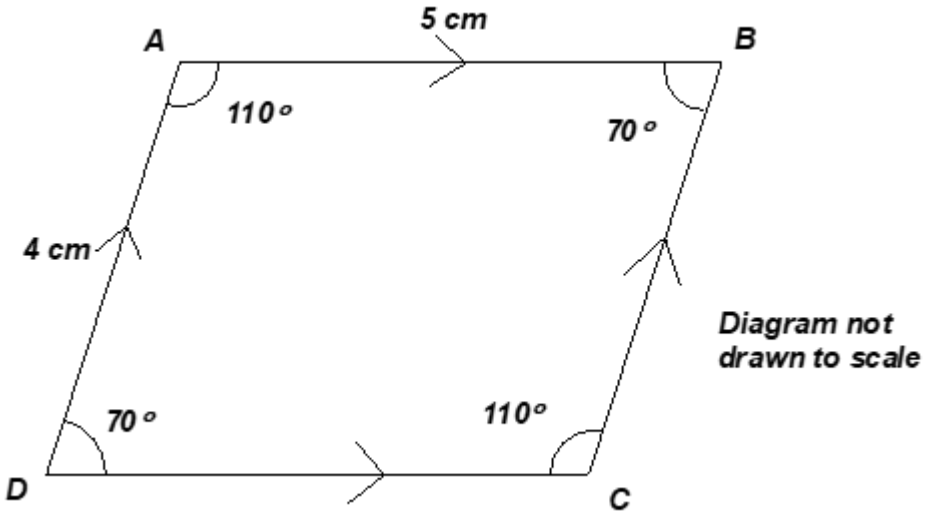
Item identity	AO1 marks	AO2 marks	C/N/E*	Content reference(s) from the learning ladder	Marks
Maths6SB8a	1		N	6G1a Identify properties of 2D shapes: polygons up to 8 sides, circle, open and closed, regular and irregular	1
Maths6SB8b		2	N	6G2a Classify angles (acute, right angled, obtuse, reflex)	2
Maths6SB8c		2	N	6G1c Identify quadrilaterals and their properties: square, rectangle, rhombus, trapezium, parallelogram, regular and irregular	2
Total marks	1	4			5

*C = Calculator required, N = Calculator not allowed, E = Either

Item purpose

The question assesses identification of types of the quadrilaterals, its angles and properties.

Sources and diagrams



Question(s)

1 Refer to the figure given above and answer the questions.

1 (a) Is the figure shown above an open or a closed shape? (1 mark)

1 (b) Write any one obtuse angle and one acute angle from the figure shown above. Use the proper naming convention while writing the angle. (2 marks)

1 (c) Identify the type of quadrilateral shown above and find the measurement of side BC. (2 marks)

(Total marks 5)

Mark scheme

1 (a) Is the figure shown above an open curve or a closed curve?

Answer	Guidance
Closed Curve	Award mark 1 for correct answer. Reasoning is optional
1 (b) Write any one obtuse angle and one acute angle from the figure shown above. Use the proper naming convention while writing the angle.	
Answer	Guidance
Obtuse angle: ∠ADC∠ADC / ∠CDA∠CDA Acute angle: ∠BCD∠BCD / ∠DCB∠DCB	A1: Award 1 mark for obtuse angle A1: Award 1 mark for acute angle. **Note**: Accept following answers also: Obtuse angle: ∠BAD∠BAD / ∠DAB∠DAB Acute angle: ∠ABC∠ABC / ∠CBA∠CBA **Note**: Overall 1 mark to be awarded only if: a. ∠A∠A or ∠D ∠D is written for obtuse angle AND b. ∠B∠B or ∠C∠C is written for acute angle Full 2 marks are not given as proper naming convention is not followed. **Note**: No marks are awarded if recognition of obtuse and acute angle is not correct even if naming convention is appropriate.
1 (c) Identify the type of quadrilateral shown above and find the measurement of side BC.	
Answer	Guidance
Quadrilateral: Parallelogram. Measurement of side BC: 4 cm.	A1: As both the pairs of opposite sides of the quadrilateral is parallel, it is a parallelogram. Award 1 mark for identification of quadrilateral. (allow slight misspellings) Reasoning is optional. A1: As opposite sides of a parallelogram are equal in length, BC = AD = 4 cm. Award 1 mark for measurement of side BC. Reasoning is optional.

Maths6HK1

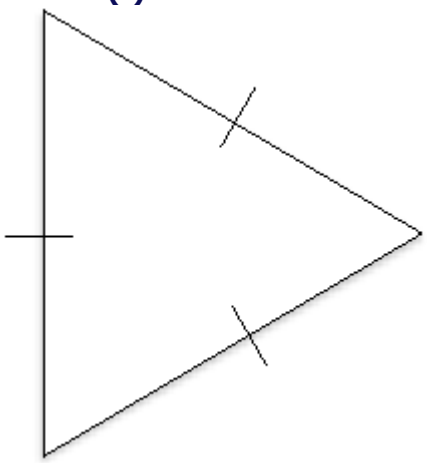
Item identity	AO1 marks	AO2 marks	C/N/E*	Content reference(s) from the learning ladder	Marks
Maths6HK1	1		E	6G1b Identify triangles and their properties using given angles or sides: scalene, isosceles, equilateral	1

*C = Calculator required, N = Calculator not allowed, E = Either

Item purpose

The question assesses the students ability to identify different types of triangles

Source(s)



Source information: book/journal, author, publisher, website link etc.

Question(s)

1. Identify the type of triangle in the figure above?
   A. Equilateral
   B. Isosceles
   C. Right angled
   D. Scalene

(1 mark)
(Total marks 1)

Mark scheme

1 Identify the type of triangle in the figure above? A. Equilateral B. Isosceles C. Right angled D. Scalene	
Answer	Guidance
A. Equilateral	1 mark M1 No mark A1 1 No half marks Allow 1 mark for answer only

Maths6SB5

Item identity	AO1 marks	AO2 marks	C/N/E*	Content reference(s) from the learning ladder	Marks
Maths6SB5	1		N	6G1b Identify triangles and their properties using given angles or sides: scalene, isosceles, equilateral	1

*C = Calculator required, N = Calculator not allowed, E = Either

Item purpose

The question assesses identification of type of triangles using its properties.

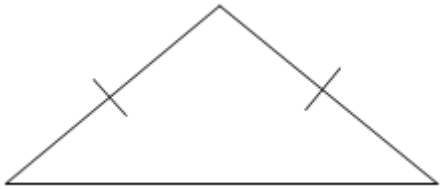
Sources and diagrams

Source information if copied: book/journal, author, publisher, website link etc.

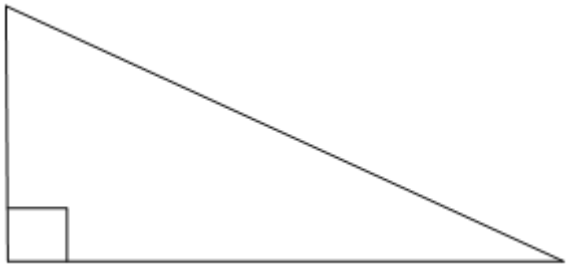
Question

1 Identify the isosceles right - angled triangle from the given options.

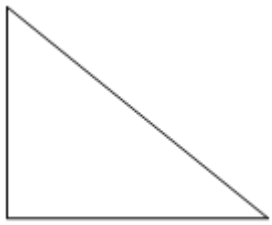
A.



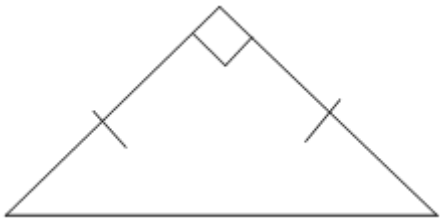
B.



C.



D.



(1 mark)

Mark scheme

1. Identify the isosceles right - angled triangle from the given options.	
Answer	Guidance
D.	Award 1 mark for the correct answer.

Maths6GK6

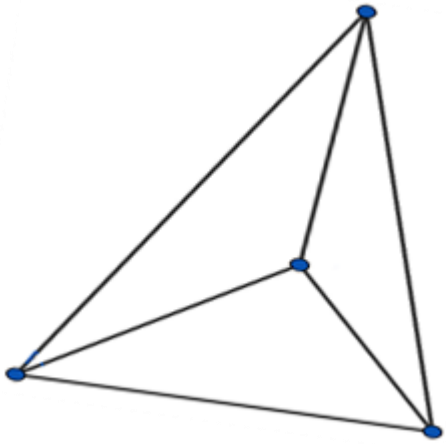
Item identity	AO1 marks	AO2 marks	C/N/E*	Content reference(s) from the learning ladder	Marks
Maths6GK6a	1		E	6G1e Identify 3D shapes and their properties: sphere, cube, cuboid, cylinder, cone, triangular prism, triangular and square based pyramids	1
Maths6GK6b	2		E	6G1d Name properties of 3D shapes: angles, edges, vertices and faces	2
Maths6GK6c	1		E	6G1d Name properties of 3D shapes: angles, edges, vertices and faces	1
Total marks	**4**				**4**

*C = Calculator required, N = Calculator not allowed, E = Either

Item purpose

The question assesses the knowledge of properties of 3D Shapes

Source(s)



Source information: Constructed using Geogebra

Question(s)

1 The diagram above shows the plan of a 3D shape.

1 (a) Identify the shape.

(1 mark)

1 (b) Write the number of vertices and number of edges.

(2 marks)

1 (c) What is the shape of each face of the given figure?

(1 mark)

(Total marks 4)

Mark scheme

1 (a) Identify the shape given in the figure.	
Answer	Guidance
tetrahedron	A1 tetrahedron OR triangular pyramid
1 (b) Write the number of vertices and number of edges.	
Answer	Guidance
No. of vertices = 4 No. of edges = 6	1 mark each for correct answer.
1 (c) What is the shape of each face of the given figure?	
Answer	Guidance
Triangle	1 mark for correct answer. Allow equilateral or isosceles triangle

Maths6SB4

Item identity	AO1 marks	AO2 marks	C/N/E*	Content reference(s) from the learning ladder	Marks
Maths6SB4	1		E	6G1e Identify 3D shapes and their properties: sphere, cube, cuboid, cylinder, cone, triangular prism, triangular and square based pyramids	1

*C = Calculator required, N = Calculator not allowed, E = Either

Item purpose

The question assesses identification of 3D shapes.

Sources and diagrams

Source: https://commons.wikimedia.org/wiki/File:Triangular_Prism_Drawing.jpg (Under Creative Common License)

Question

1 Identify the 3D shape given in the figure above.

A. Cone
B. Triangle
C. Triangular Prism
D. Triangular Pyramid

(1 mark)

Mark scheme

1. Identify the 3D shape given in the figure above. A. Cone B. Triangle C. Triangular Prism D. Triangular Pyramid	
Answer	Guidance
C. Triangular Prism	Accept only C or only Triangular Prism. Award 1 mark for the correct answer

Maths6GK5

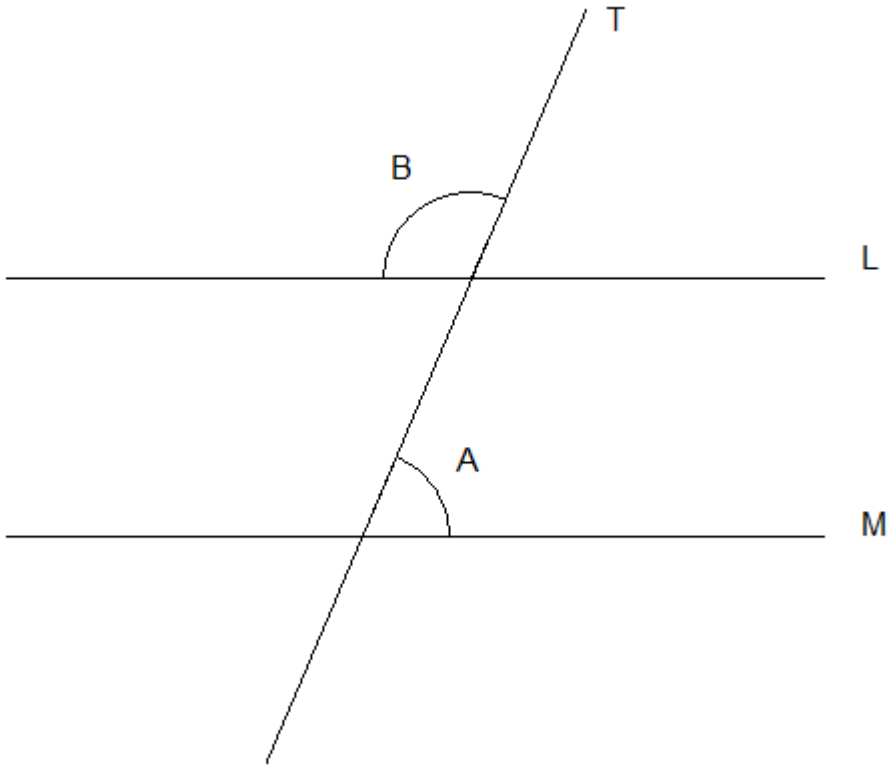
Item identity	AO1 marks	AO2 marks	C/N/E*	Content reference(s) from the learning ladder	Marks
Maths6GK5a	1		E	6G2c Identify properties of parallel lines	1
Maths6GK5b		2	E	6G2c Identify properties of parallel lines	2
Total marks	**1**	**2**			**3**

*C = Calculator required, N = Calculator not allowed, E = Either

Item purpose

The question assesses the knowledge of properties of parallel lines.

Source(s)



Not to scale

Source information: Created by M Collett

Question(s)

1 In the diagram above, L and M are parallel lines and T is a transversal.

1 (a) Write the number of points of intersection between L and M.

(1 mark)

1 (b) If the angle A =70^0, find the angle B.

(2 marks)

(Total marks 3)

Mark scheme

1 (a) Write the number of points of intersection of l and m.	
Answer	Guidance
Zero	A1 0 OR " they don't meet at all"
1 (b) If the angle A =70^0 , Find the angle B. Show your working.	
Answer	Guidance
Angle B =110^0	M1 180^0-70^0=110^0 A1 110^0

Maths6GK1

Item identity	AO1 marks	AO2 marks	C/N/E*	Content reference(s) from the learning ladder	Marks
Maths6GK1	1		E	6G3a Identify lines of symmetry of 2D shapes	1

*C = Calculator required, N = Calculator not allowed, E = Either

Item purpose

The question assesses the knowledge of a student to identify lines of symmetry of 2 D shapes.

Source(s)

Source information: book/journal, author, publisher, website link etc.

Question(s)

1 Which type of triangle has three lines of symmetry?

(1 mark)

(Total marks 1)

Mark scheme

1 Which type of triangle has three lines of symmetry?	
Answer	Guidance
An equilateral triangle has 3 lines of symmetry.	1 mark for correct answer.

Maths6HK5

Item identity	AO1 marks	AO2 marks	C/N/E*	Content reference(s) from the learning ladder	Marks
Maths6HK5	1		E	6G3a Identify lines of symmetry of 2D shapes	1

*C = Calculator required, N = Calculator not allowed, E = Either

Item purpose

The question assesses the ability of students to identify lines of symmetry.

Source(s)

Source information: book/journal, author, publisher, website link etc.

Question(s)

1  Which of the following shapes is has no lines of symmetry?

A. 

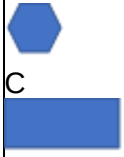
B. 

C. 

D.

(1 mark)
(Total marks 1)

Mark scheme

5. . Which of the following shape is not symmetrical on even one line of symmetry? A  B  C  D	
Answer	Guidance
A. 	1 mark M1 No mark A1 1 No half marks Allow 1 mark for answer only

Maths6SB3

Item identity	AO1 marks	AO2 marks	C/N/E*	Content reference(s) from the learning ladder	Marks
Maths6SB3	1		E	6G3a Identify lines of symmetry of 2D shapes	1

*C = Calculator required, N = Calculator not allowed, E = Either

Item purpose

The question assesses lines of symmetries of the given figure.

Sources and diagrams

Question

1 How many lines of symmetry are there in the given figure?

A. 2
B. 4

C. 8
D. Infinite

(1 mark)

Mark scheme

1. How many lines of symmetries are there in the given figure? A. 2 B. 4 C. 8 D. Infinite	
Answer	Guidance
C. 8	Accept only C or only 8 Award 1 mark for the correct answer

Maths6AJ2

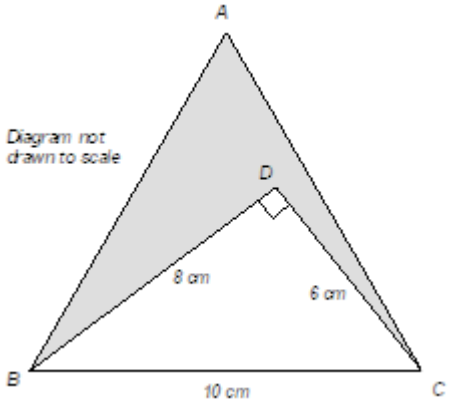
Item identity	AO1 marks	AO2 marks	C/N/E*	Content reference(s) from the learning ladder	Marks
Maths6AJ2		1	N	6M1a Find the perimeter of rectilinear shapes: including faces of 3D shapes	1

*C = Calculator required, N = Calculator not allowed, E = Either

Item purpose

The question assesses the ability to find out the perimeter.

Source(s)



Question(s)

1 In the given figure, ΔABC is an equilateral triangle. Calculate the perimeter of the shaded region. Choose the correct answer.

A. 24 cm
B. 34 cm
C. 48 cm
D. 480 cm

(1 mark)

(Total marks 1)

Mark scheme

1 In the given figure, ∆ABC is an equilateral triangle. Calculate the perimeter of the shaded region. Choose the correct answer. A. 24 cm B. 34 cm C. 48 cm D. 480 cm	
Answer	Guidance
B. 34 cm	(optional) AB = BC = CA = 10 cm Perimeter = AB + BD + DC + CA = 10 + 8 + 6 + 10 = 34 cm Allow one mark for correct answer.

Maths6AJ6

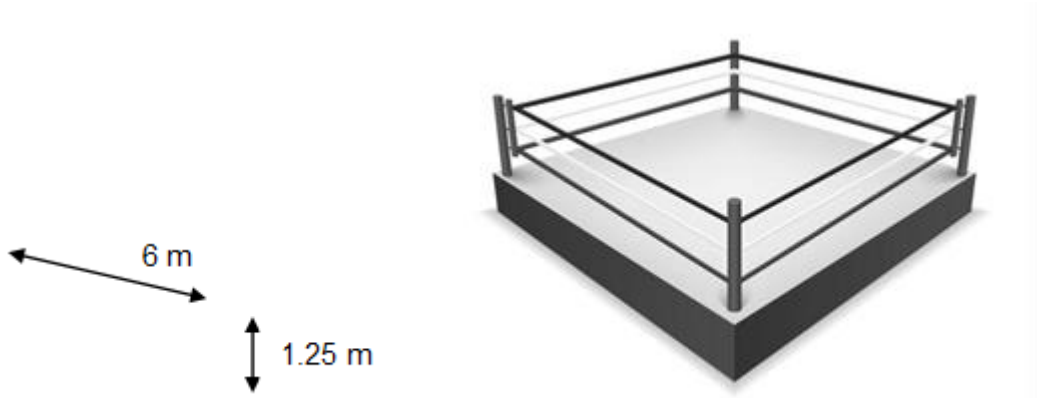
Item identity	AO1 marks	AO2 marks	C/N/E*	Content reference(s) from the learning ladder	Marks
Maths6AJ6a		1	N	6N3c Multiply decimals up to 3 significant figures by positive integers or decimals up to 2 significant digits.	1
Maths6AJ6b		2	N	6M1a Find the perimeter of rectilinear shapes: including faces of 3D shapes	2
Total marks		3			3

*C = Calculator required, N = Calculator not allowed, E = Either

Item purpose

The question assesses the ability to find out perimeter of rectangular objects in the surroundings.

Source(s)



Not to scale

Question(s)

1 A boxing ring has dimensions as shown in the above figure. There are two ropes on each side of the ring, and each rope is 6 m long. The ropes are connected to the corner posts which are 1.25 m high.

1 (a) Calculate the total length of four corner posts.

(1 mark)

1 (b) Find total length of the ropes attached on all four sides of the boxing ring. Show your calculations.

(2 marks)

(Total marks 3)

Mark scheme

1 (a) Calculate the total length of four corner posts.	
Answer	Guidance
5 m	A1 5m or $4 \times 1.25 = 5 \text{ m}$ Allow unit to be missing.
1 (b) Find total length of the ropes attached on all four sides of the boxing ring. Show your calculations.	
Answer	Guidance
48 m	M1 Length of rope in 1 round = Perimeter = $4 \times \text{side} = 4 \times 6 = 24 \text{ m}$, or equivalent. AND Total length of ropes = $2 \times \text{Perimeter} = 2 \times 24 = 48 \text{ m}$ or equivalent Allow 1 mark for correct answer only. Allow units to be missing

Maths6AJ7

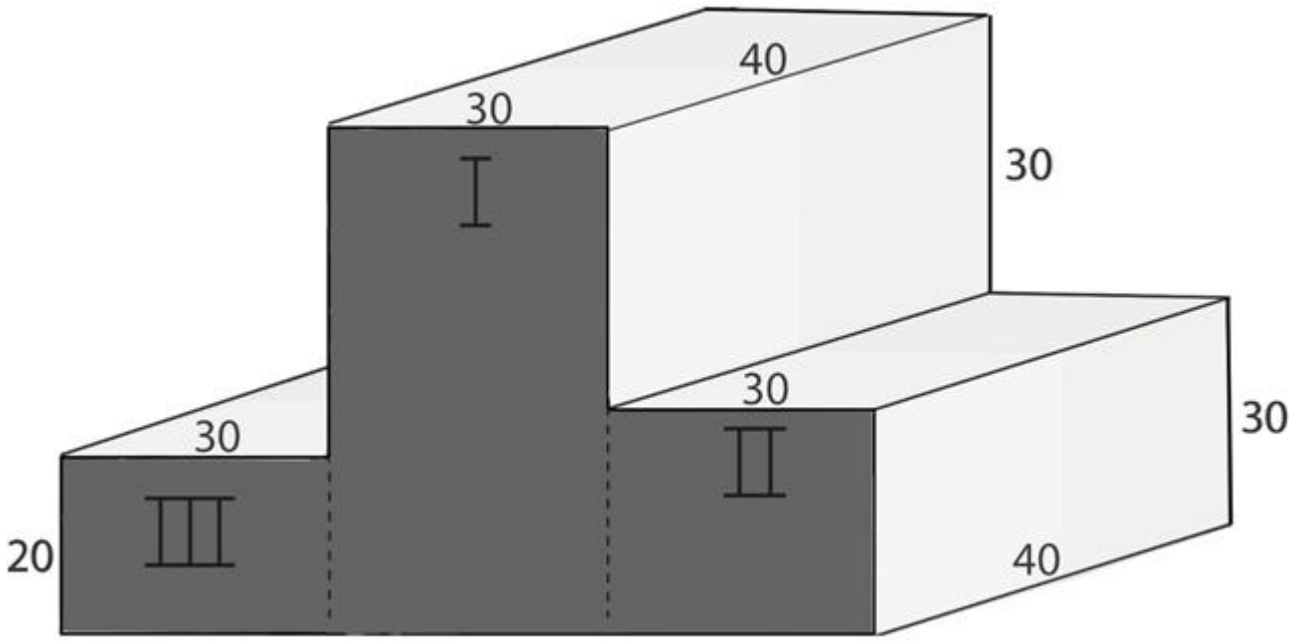
Item identity	AO1 marks	AO2 marks	C/N/E*	Content reference(s) from the learning ladder	Marks
Maths6AJ7a	1		N	6N1b Add and subtract positive integers or decimals up to 4 digits.	1
Maths6AJ7b	2		N	6M1a Find the perimeter of rectilinear shapes: including faces of 3D shapes	2
Maths6AJ7c	4		N	6M2a Find the area of rectilinear shapes: including faces of 3D shapes	4
Total marks	**7**				**7**

*C = Calculator required, N = Calculator not allowed, E = Either

Item purpose

The question assesses the ability to find out area and perimeter of rectilinear surfaces of 3D shapes from our surroundings.

Source(s)



Question(s)

1 The figure above shows a victory stand. All dimensions are given in cm.

1 (a) What is the measure of missing length AB?

(1 mark)

1 (b) Calculate the perimeter of the shaded region.

(2 marks)

1 (c) Find the area of the shaded region. Show your working.

(3 marks)

(Total marks 7)

Mark scheme

1 (a) What is the measure of missing length AB?	
Answer	Guidance
90 cm	A1 $30+30+30=90$ cm$30+30+30=90$ cm , or equivalent Allow 1 mark for correct answer only.
1 (b) Calculate the perimeter of the shaded region.	
Answer	Guidance
300 cm	M1 Perimeter = Sum of all sides/boundaries = $90+20+30+40+30+30+30+30$, $90+20+30+40+30+30+30+30$, or equivalent. A1 = 300 cm

	Allow 2 marks for correct answer only. Allow units to be missing.
1 (c) Find the area of the shaded region.	
Answer	Guidance
3300 square cm	M1 for area of any rectangle Area of region I = $60 \times 30 = 1800$ sq cm$60 \times 30 = 1800$ sq cm Area of region II = $30 \times 30 = 900$ sq cm$30 \times 30 = 900$ sq cm Area of region III = $20 \times 30 = 600$ sq cm$20 \times 30 = 600$ sq cm M1 Total area = sum of their three rectangles $1800+900+600=3300$ sq cm, $1800+900+600=3300$ sq cm, or equivalent Allow 2 marks for correct answer only. Allow units to be missing.

Maths6HK7

Item identity	AO1 marks	AO2 marks	C/N/E*	Content reference(s) from the learning ladder	Marks
Maths6HK7a	2		E	6M1a Find the perimeter of rectilinear shapes: including faces of 3D shapes	2
Maths6HK7b	2		E	6M2a Find the area of rectilinear shapes: including faces of 3D shapes	2
Total marks	**4**				**4**

*C = Calculator required, N = Calculator not allowed, E = Either

Item purpose

The question assesses the ability of students to find the perimeter and area of shapes

Source(s)

Word Art

Source information: book/journal, author, publisher, website link etc.

Question(s)

1 The given figure is made up of identical squares each with 2cm sides

1 (a) Calculate the perimeter of the given figure.

(2 marks)

1 (b) Calculate the area of the given figure.

(2 marks)
(Total marks 4)

Mark scheme

1 (a) Calculate the perimeter of the given figure.	
Answer	Guidance
16cm	2 marks M1 16 x 2 or equivalent A1 32cm
1 (b) Calculate the area of the given figure.	
Answer 7 cm^2	Guidance
28 cm^2	M1 Area of 1 square= 2×2=4 A1 Area= 4×7= 28 cm^2

Maths6KK3

Item identity	AO1 marks	AO2 marks	C/N/E*	Content reference(s) from the learning ladder	Marks
Maths6KK3	2		E	6M1a find the perimeter of rectilinear shapes including faces of 3D shapes	2
Total marks	2				2

*C = Calculator required, N = Calculator not allowed, E = Either

Item purpose

The question assesses the students' ability to learn about operations and find the perimeter of a rectangle

Source(s)

Source information: book/journal, author, publisher, website link etc.

Question(s)

1 The dimensions of the top surface of a cuboid box are 10.45cm and 4.36cm. Find the perimeter of the top surface of the box.

(2 marks)

(Total marks 2)

Mark scheme

1 The dimensions of the top surface of a cuboid box are 10.45cm and 4.36cm. Find the perimeter of the top surface of the box.	
Answer	Guidance
29.82cm	M1 perimeter of top surface 10.45 + 4.36 + 10.45 + 4.36 or equivalent A1 = 29 .82cm Allow 2 Marks for correct answer

Maths6KK4

Item identity	AO1 marks	AO2 marks	C/N/E*	Content reference(s) from the learning ladder	Marks
Maths6KK4a	2		C	6M2a find the area of rectilinear shapes including faces of 3D shapes	2
Maths6KK4b	2		C	6m1a find the perimeter of rectilinear shapes including faces of 3D shapes	2
Maths6KK4c	2		C	6N3c multiply decimals up to 3 significant figures by positive integers or decimals up to 2 significant digits	2
Total marks	**6**				**6**

*C = Calculator required, N = Calculator not allowed, E = Either

Item purpose

The question assesses the students' ability to solve problems in daily life situations and their use of fractions and decimals

Source(s)

Source information: book/journal, author, publisher, website link etc.

Question(s)

1 Ishita is making a rectangular display board for a mathematics project in school. The length and breadth of the display board are 6.37m and 4.43m respectively.

1 (a) Calculate the area of the display board.

(2 marks)

1 (b) Calculate the perimeter of the display board

(2 marks)

1 (c) Ishita needs 37 m of ribbon to decorate the display board. The cost of the ribbon per metre is Rs. 5.52. Find the cost of the ribbon.

(2 marks)

(Total marks 6)

Mark scheme

1 (a) Calculate the area of the display board	
Answer	Guidance
28.2191 m^2	M1 area of display board = length x breadth = 6.37 m x 4.43 m A1 = 28.2191 m^2 Allow 1 mark for formula, and 1 mark for correct answer
1 (b) Calculate the perimeter of the display board	
Answer	Guidance
21.6 m	M1 perimeter of display board =2(length + breadth) =2 (6.37 + 4.43) A1 =21.6 m Allow 1 mark for method and 1 mark for correct answer

1 (c) Ishita needs 37 m of ribbon to decorate the display board. The cost of the ribbon per metre is Rs. 5.52. Find the cost of the ribbon.	
Answer	Guidance
Rs. 204.24	M1 Total cost of ribbon= 37 x 5.52 A1 = Rs 204.24 Allow 2 marks for correct answer

Maths6KK5

Item identity	AO1 marks	AO2 marks	C/N/E*	Content reference(s) from the learning ladder	Marks
Maths6KK5a		2	N	6M2a find the area of rectilinear shapes including faces of 3D shapes	2
Maths6KK5b		2	N	6M1a find the perimeter of rectilinear shapes including faces of 3D shapes	2
Total marks		**4**			**4**

*C = Calculator required, N = Calculator not allowed, E = Either

Item purpose

The question assesses the students' ability to solve problems in daily life situations and their use of fractions and decimals

Source(s)

Source information: book/journal, author, publisher, website link etc.

Question(s)

1 Rohan painted $\frac{5}{12}$ of a wall white and $\frac{1}{3}$ of the wall yellow. The rest of the wall is red.

1 (a) Calculate the fraction of the wall that is painted red. Give your answer in simplest form. (2 marks)

1 (b) Convert the fraction of the wall that is white to a decimal correct to four decimal places. (2 mark)

(Total marks 4)

Mark scheme

1 (a) Calculate the fraction of the wall that is painted red.	
Answer	Guidance
A1 portion of red painted wall = $\frac{1}{4}$	M1 portion of red painted wall = 1- ($\frac{5}{12}$ + $\frac{1}{3}$) = 1-

	$\frac{9}{12}\frac{9}{12}$ A1 = $\frac{3}{12}\frac{3}{12}$ or $\frac{1}{4}\frac{1}{4}$ Allow 1 mark for method, and 1 mark for correct answer
1 (b) Convert the fraction of the wall that is white to a decimal correct to four decimal places.	
Answer	Guidance
0.4167	M1 white wall portion= 5 divided by 12 A1 =0.4167 Allow 1 mark for 0.4166

Maths6RB3

Item identity	AO1 marks	AO2 marks	C/N/E*	Content reference(s) from the learning ladder	Marks
Maths6RB3		2	C	6M1a Find the perimeter of rectilinear shapes: including faces of 3D shapes	2

*C = Calculator required, N = Calculator not allowed, E = Either

Item purpose

The question assesses the perimeter of rectangular objects in the surroundings.

Sources and diagrams

Source information if copied: book/journal, author, publisher, website link etc.

Question

1 The length of a rectangular lawn is 5 times its breadth. The perimeter of the lawn is 648.6 cm.

Find the breadth of the lawn.

(1 mark)
(Total marks 1)

Mark scheme

1. The length of a rectangular lawn is 5 times its breadth. Perimeter of the lawn is 648.6 cm. Find the breadth of the lawn. 2.	
Answer	Guidance
54.05 cm	M1 Let the breadth of the lawn be b cm $648.60=2(b+5b)$ OR equivalent $\Rightarrow\Rightarrow$ b=54.05 (cm) Allow no units

Maths6RB5

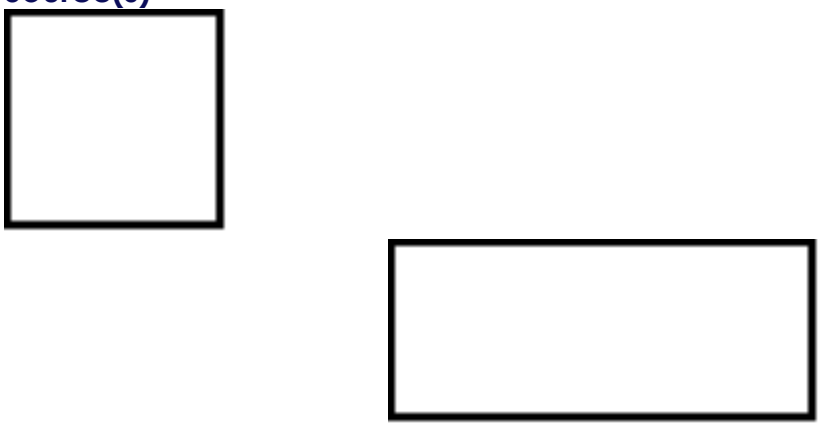
Item identity	AO1 marks	AO2 marks	C/N/E*	Content reference(s) from the learning ladder	Marks
Maths6RB5a		2	C	6M1a Find the perimeter of rectilinear shapes: including faces of 3D shapes	2
Maths6RB5b		2	C	6M1a Find the perimeter of rectilinear shapes: including faces of 3D shapes	2
Maths6RB5c		2	C	6M1a Find the perimeter of rectilinear shapes: including faces of 3D shapes	2
Total marks		**6**			**6**

*C = Calculator required, N = Calculator not allowed, E = Either

Item purpose

The question assesses knowledge of the perimeter of rectangular objects.

Source(s)



Rectangular Garden Square Garden

Not to scale

Source information: book/journal, author, publisher, website link etc.

Question(s)

1 The picture above shows the images of a rectangular garden and a square garden. The two gardens have the same perimeter of 26.16 m.

1 (a) Find the side of the square garden.

(2 marks)

1 (b) The rectangular garden has a breadth 0.5 m less than its length. Find the length of the garden.

(2 marks)

1 (c) Find the cost of fencing both of the gardens if fencing costs Rs 30 per metre.

(2 marks)

(Total marks 6)

Mark scheme

1 (a) Find the side of the square garden

Answer	Guidance
Side = 6.54 m	M1 26.16 ÷ 4 OR equivalent A1 6.54 (m)
1 (b) The rectangular garden has a breadth 0.5 m less than its length. Find the length and breadth of the garden.	
Answer	Guidance
Length = 6.79 m	M1 2(length + length – 0.5) = 26.16 Or equivalent A1 6.79 m
1 (c) Find the cost of fencing both of the gardens if fencing costs Rs 30 per metre.	
Answer	Guidance
Rs 1569.6	M1 2 x 26.16 x 30 A1 Rs 1569.6

Maths6RB6

Item identity	AO1 marks	AO2 marks	C/N/E×	Content reference(s) from the learning ladder	Marks
Maths6RB6a		2	C	6M1a Find the perimeter of rectilinear shapes: including faces of 3D shapes	2
Maths6RB6b		2	C	6M2a Find the area of rectilinear shapes: including faces of 3D shapes	2
Total marks		4			4

*C = Calculator required, N = Calculator not allowed, E = Either

Item purpose

The question assesses understanding of the perimeter and area of rectangular objects in the surroundings like floor of the class room, surfaces of a chalk box etc.

Source(s)

Source information: book/journal, author, publisher, website link etc.

Question(s)

1 In a school there are display boards each of length 1 m 36 cm and breadth 64 cm. 148 m of aluminium strip is available to frame the boards.

1 (a) How many boards can be framed using the aluminium strip?

(2 marks)

1 (b) How many square metres of cloth is required to cover 40 display boards? Give your answer to the nearest whole square metre.

(2 marks)

(Total marks 4)

Mark scheme

1 (a) How many boards can be framed using the aluminium strip?	
Answer	Guidance
37	M1 Perimeter of one display board = 2 × (1.36 m + 0.64 m) = 2 × 2 m = 4 m AND number of display boards = 148 / their perimeter A1 37
1 (b) How many square metres of cloth is required to cover 40 display boards?	
Answer	Guidance
35 m^2	M1 40 x 1.36 x 0.64 OR 34.8 A1 35 m^2

Maths6GK2

Item identity	AO1 marks	AO2 marks	C/N/E*	Content reference(s) from the learning ladder	Marks
Maths6GK2	1		E	6N1a Compare integers up to 8 digits using greater than, equal to or less than in words or symbols	1

*C = Calculator required, N = Calculator not allowed, E = Either

Item purpose

The question assesses the knowledge of naming large numbers in international system.

Source(s)

Source information: book/journal, author, publisher, website link etc.

Question(s)

1 Which is greater: 234,659 or 234,065?

(1 mark)

(Total marks 1)

Mark scheme

1 Which is greater: 234659 or 234065?	
Answer	Guidance
234659	1 mark for correct answer. Alternatively if 234659> 234065 or 234065<234659 is written in symbols or words, the full mark can be given.

Maths6KK2

Item identity	AO1 marks	AO2 marks	C/N/E*	Content reference(s) from the learning ladder	Marks
Maths6KK2		1	E	6N1a compare up to 8 digits using greater than, equal to or less than in words or symbol	1
Total marks		**1**			**1**

*C = Calculator required, N = Calculator not allowed, E = Either

Item purpose

The question assesses the students' ability to learn about operations and find the perimeter of a rectangle

Source(s)

Source information: book/journal, author, publisher, website link etc.

Question(s)

1 75,328 people were vaccinated for Covid-19 in Rajasthan in a day. The same day 274,320 people were vaccinated in Chennai for Covid-19.

In which state were most people vaccinated?

(1 mark)

(Total marks 1)

Mark scheme

1. 75,328 people were vaccinated for Covid-19 in Rajasthan in a day. The same day 2,74,320 people were vaccinated in Chennai for Covid-19. In which state were most people vaccinated?	
Answer	Guidance
Rajasthan	A1 in Rajasthan most people were vaccinated. Allow 1 mark for correct answer.

Maths6SB7

Item identity	AO1 marks	AO2 marks	C/N/E*	Content reference(s) from the learning ladder	Marks
Maths6SB7a	1		N	6N1a Compare integers up to 8 digits using greater than, equal to or less than in words or symbols	1
Maths6SB7b		2	N	6N1e Add and subtract negative numbers	2
Total marks	1	2			3

*C = Calculator required, N = Calculator not allowed, E = Either

Item purpose

The question assesses comparison as well as addition/subtraction of integers.

Sources and diagrams

Source information if copied: book/journal, author, publisher, website link etc.

Question(s)

1 At a weather centre, the temperature recorded at midnight was -21 °C. By Noon the next day, the temperature changed to 4

°°

C.

1 (a) Which is has the higher temperature midnight or noon?

(1 mark)

1 (b) By how many degrees had the temperature changed from midnight to noon?

(2 marks)

(Total marks 3)

Mark scheme

1 (a) Which is warmer, midnight or noon?	
Answer	Guidance
Noon	Since 4 > - 21, noon is warmer. (Optional) Award one mark if answer is correct.
1 (b) By how many degrees had the temperature changed from midnight to noon?	
Answer	Guidance
25 °° C	M1: Change in temperature = New temperature – Old temperature Change = (4) – (-21) Accept pictorial representation OR representation on number line for 1 mark of method. **Note**: No method marks if written in reverse: (- 21) – (4) A1: Award 2 marks for correct answer only.

Maths6HK3

Item identity	AO1 marks	AO2 marks	C/N/E*	Content reference(s) from the learning ladder	Marks
Maths6HK3	1		N	6N1b Add and subtract positive integers or decimals up to 4 digits	1

*C = Calculator required, N = Calculator not allowed, E = Either

Item purpose

The question assesses subtraction of currency

Source(s)

Source information: book/journal, author, publisher, website link etc.

Question(s)

1 A customer purchases a new T.V. set under an exchange scheme by giving his old T.V. set and paying Rs 6,200 cash. If the actual price of the new T.V. is Rs 13,000 how much is the old T.V. worth?

A. Rs 6200
B. Rs 6800
C. Rs 7000
D. Rs 13,000

(1 mark)
(Total marks 1)

Mark Scheme

1 A customer purchases a new T.V. set under an exchange scheme by giving his old T.V. set and paying Rs. 6,200 cash. If the actual price of the new T.V. is Rs. 13,000 how much is the old T.V. worth? A. Rs 6200 B. Rs 6800 C. Rs 7000 D. Rs 13,000	
Answer	Guidance
B. 6800	1 mark for answer only

Maths6KK1

Item identity	AO1 marks	AO2 marks	C/N/E*	Content reference(s) from the learning ladder	Marks
Maths6KK1	1		C	6N1b Add and subtract positive integers or decimals up to 4 digits	1
Total marks	**1**				**1**

*C = Calculator required, N = Calculator not allowed, E = Either

Item purpose

The question assesses the students' ability to learn about operations and the perimeter of a triangle

Source(s)

Source information: book/journal, author, publisher, website link etc.

Question(s)

1 Sonam, a lab attendant, purchased 251.3721mg calcium for a lab practical. After completing the practical 105.2364mg calcium remained.

Calculate how much calcium was used in the practical.

(1 mark)

(Total marks 1)

Mark scheme

1 Sonam, a lab attendant, purchased 251.3721mg calcium for a lab practical. After completing the practical 105.2364mg calcium remained. Calculate how much calcium was used in the practical.	
Answer	Guidance
146.1357mg	251.3721 – 105.2364 A1 = 146.1357 mg Allow 1 mark for correct answer

Maths6MG1

Item identity	AO1 marks	AO2 marks	C/N/E*	Content reference(s) from the learning ladder	Marks
Maths6MG1	1		C	6N1b Add and subtract positive integers or decimals up to 4 digits	1

*C = Calculator required, N = Calculator not allowed, E = Either

Item purpose

The question assesses problems involving large numbers by applying appropriate operations

Source(s)

Source information: book/journal, author, publisher, website link etc.

Question(s)

1 Calculate the sum of 2.6534 and 6.1723

(1 mark)

(Total 1 mark)

Mark scheme

1 Calculate the sum of 2.6534 and 6.1723	
Answer	Guidance
8.8257	A1 8.8257

Maths6RB2

Item identity	AO1 marks	AO2 marks	C/N/E*	Content reference(s) from the learning ladder	Marks
Maths6RB2	1		C	6N1b Add and subtract positive integers or decimal up to 4 digits	1

*C = Calculator required, N = Calculator not allowed, E = Either

Item purpose

The question assesses problem involving addition and subtraction of numbers

Sources and diagrams

Source information if copied: book/journal, author, publisher, website link etc.

Question

1 What number must be subtracted from 10,010,101 to get 2,659,697?

(1 mark)
(Total marks 1)

Mark scheme

1. What number must be subtracted from 10,010,101 to get 2,659,697?	
Answer	Guidance
7,350,404	Allow 1 mark for answer with or without commas

Maths6RB4

Item identity	AO1 marks	AO2 marks	C/N/E*	Content reference(s) from the learning ladder	Marks
Maths6RB4a	1		C	6N3d Divide decimals up to 3 significant figures by positive integers up to 2 digits	1
Maths6RB4b	1		C	6N1c Multiply positive integers up to 3 digits	1
Maths6RB4c	2		C	6N1c Multiply positive integers up to 3 digits	2
Total marks	**4**				**4**

*C = Calculator required, N = Calculator not allowed, E = Either

Item purpose

The question assesses problems involving numbers by applying appropriate operations (addition, subtraction, multiplication and division) related to daily life

Source(s)

Source information: book/journal, author, publisher, website link etc.

Question(s)

1 There is a cloth factory in which workers are given Rs 765 as a daily wage. Every day the cloth factory produces 1791 m length of cloth.

1 (a) The length of cloth required to make a shirt is 2.25 m. How many shirts can be made from the cloth produced in one day?

(1 mark)

1 (b) What length of cloth will be manufactured in 29 working days?

(1 mark)

1 (c) What will be the salary of a worker for 4 weeks if Sunday is considered as a day off?

(2 marks)

(Total marks 4)

Mark scheme

1 (a) The length of cloth required to make a shirt is 2.25 m. How many shirts can be made from the cloth produced in one day?	
Answer	Guidance
796 Shirts	A1 796
1 (b) How much cloth will be manufactured in the month of February 2020?	
Answer	Guidance
51,939 m	A1 51,939 m Allow 1 mark with or without comma or units
1 (c) What will be the salary of each worker be for 4 weeks if Sunday is considered as a day off?	
Answer	Guidance
Rs 18,360	M1 24 x 765 A1 Rs 18,360 Allow 1 mark with or without comma or units

Maths6AJ5

Item identity	AO1 marks	AO2 marks	C/N/E*	Content reference(s) from the learning ladder	Marks
Maths6AJ5		1	N	6N1e Add and subtract negative numbers	1

*C = Calculator required, N = Calculator not allowed, E = Either

Item purpose

The question assesses problems involving addition of integers.

Source(s)

Source information: book/journal, author, publisher, website link etc.

Question(s)

1 A submarine is at a depth of 325 m below the sea level. It further sank by 125 m for a search-and-rescue mission. What is the new position of the submarine?

A. 125 m below the sea level
B. 200 m below the sea level
C. 325 m below the sea level
D. 450 m below the sea level

(1 mark)

(Total marks 1)

Mark scheme

1. A submarine is at a depth of 325 m below the sea level. If is further sunk by 125 m for a search-and-rescue mission. What is the new position of the submarine? A. 125 m below the sea level B. 200 m below the sea level C. 325 m below the sea level D. 450 m below the sea level	
Answer	Guidance
D. 450 m below the sea level	-325 + (-125) = -450 m (optional) Allow 1 mark for correct answer

Maths6AS4

Item identity	AO1 marks	AO2 marks	C/N/E*	Content reference(s) from the learning ladder	Marks
Maths6AS4	1		E	6N1e Add and subtract negative numbers	1

*C = Calculator required, N = Calculator not allowed, E = Either

Item purpose

The question assesses the students' knowledge of operations on negative numbers.

Sources and diagrams

Source information if copied: book/journal, author, publisher, website link etc.

Question

1 Which of these numbers is 1 more than -49?

A. -48
B. 48
C. -50
D. 50

(1 mark)

Mark scheme

1.Which of these numbers is 1 more than -49? A. -48 B. 48 C. -50 D. 50	
Answer	Guidance
A. - 48	1 mark Allow 1 mark for correct answer

Maths6AT3

Item identity	AO1 marks	AO2 marks	C/N/E	Content reference(s) from the learning ladder	Marks
Maths6AT3	1		N	6N1e Add and subtract negative numbers	1

Item purpose

The question assesses simplification of integers.

Source(s)

Source information: book/journal, author, publisher, ISBN, website address etc.

Question(s)

1 The predecessor of an integer is (n + 13) and the successor of the integer is (- n + 7)
Choose the correct integer:

A. -4
B. -3
C. -2
D. 2

(1 mark)
(Total marks 1)

Mark scheme

1 The predecessor of an integer is (n + 13) and the successor of the integer is (- n + 7) Find the integer. A. -4 B. -3 C. -2 D. 2	
Answer	Guidance
A. - 4	1 mark for correct answer only

Maths6RB1

Item identity	AO1 marks	AO2 marks	C/N/E*	Content reference(s) from the learning ladder	Marks
Maths6RB1		2	N	6N1e Add and subtract negative numbers	2

*C = Calculator required, N = Calculator not allowed, E = Either

Item purpose

The question assesses problems on daily life situations involving addition and subtraction of decimals

Sources and diagrams

Source information if copied: book/journal, author, publisher, website link etc.

Question

1 A car travelled 390.4 km to the west of Ranchi and then travelled 1600.2 km to the east from there. How far is the car from Ranchi and in which direction?

(2 marks)
(Total marks 2)

Mark scheme

1 A car travelled 390.4 km to the west of Ranchi and then travelled 1600.2 km to the east from there. How far is the car from Ranchi?	
Answer	Guidance
1209.8 km	M1 1600.2 - 390.4 or equivalent A 1 1209.8 km to the west Allow 1 mark for 1209.8 without direction

Maths6AS2

Item identity	AO1 marks	AO2 marks	C/N/E*	Content reference(s) from the learning ladder	Marks
Maths6AS2	1		E	6N2a Number patterns: odd, even, multiples and prime numbers	1

*C = Calculator required, N = Calculator not allowed, E = Either

Item purpose

The question assesses the knowledge of prime numbers, odd numbers, even numbers and composite numbers.

Sources and diagrams

Source information if copied: book/journal, author, publisher, website link etc.

Question

1 If we multiply 2 prime numbers, the product will always be:

A. a composite number
B. an even number
C. an odd number
D. a prime number

(1 mark)

Mark scheme

1. If we multiply 2 prime numbers, the product will always be: A. a composite number B. an even number C. an odd number D. a prime number	
Answer	Guidance
A. A composite number	1 mark A1 1 Allow 1 mark for correct answer

Maths6AT1

Item identity	AO1 marks	AO2 marks	C/N/E	Content reference(s) from the learning ladder	Marks
Maths6AT1	1		N	6N2a Number patterns: odd, even, multiples and prime numbers	1

Item purpose

The question assesses identification of twin prime numbers.

Source(s)

Source information: book/journal, author, publisher, ISBN, website address etc.

Question(s)

1 Find the twin prime numbers from the following options.

A. 21, 23
B. 47, 53
C. 59, 61
D. 75, 77

(1 mark)
(Total marks 1)

Mark scheme

1. Find the twin prime numbers from the following options. A. 21, 23 B. 47, 53 C. 59, 61 D. 75, 77	
Answer	Guidance
C. 59, 61	1 mark for correct answer

Maths6HK2

Item identity	AO1 marks	AO2 marks	C/N/E*	Content reference(s) from the learning ladder	Marks
Maths6HK2	1		E	6N2a Number patterns: odd, even, multiples and prime numbers	1

*C = Calculator required, N = Calculator not allowed, E = Either

Item purpose

The question assesses the students ability to work out number patterns

Source(s)

Source information: book/journal, author, publisher, website link etc.

Question(s)

1 Which is the largest 4-digit odd number that can be made using four of the following digits- 1,6,7,8 and 9?

A. 9867
B. 9876
C. 8967
D. 9871

(1 mark)
(Total marks 1)

Mark Scheme

1 Which is the largest 4-digit odd number that can be made using four of the following digits- 1,6,7,8 and 9? A. 9867 B. 9876 C. 8967 D. 9871	
Answer	Guidance
D. 9871	A1 1 No half marks Allow 1 mark for answer only

Maths6HK6

Item identity	AO1 marks	AO2 marks	C/N/E*	Content reference(s) from the learning ladder	Marks
Maths6HK6a		1	N	6N2a Number patterns: odd, even, multiples and prime numbers	1
Maths6HK6b		2	N	6N2a Number patterns: odd, even, multiples and prime numbers	2
Maths6HK6c		2	N	6N2a Number patterns: odd, even, multiples and prime numbers	2
Total marks		**5**			**5**

*C = Calculator required, N = Calculator not allowed, E = Either

Item purpose

The question assesses the ability of students to recognise and work with number patterns

Source(s)

Source information: book/journal, author, publisher, website link etc.

Question(s)

1 Here is part of a sequence.
N, 110, 130, 160, 200

1 (a) How is each number in this pattern generated?

(1 mark)

1 (b) Find the 6th number

(2 marks)

1 (c) Find the number N.

(2 marks)
(Total marks 5)

Mark scheme

1 (a) How is each number in this pattern generated?	
Answer	Guidance
By adding increasing multiples of 10	1 mark A1 By adding increasing multiples of 10. Or equivalent
1 (b) Find the 6th number	
Answer	Guidance
250	2 marks M1 200+50 A1 250 Allow 2 marks for answer only
1 (c) Find the number before the first number i.e. 110	
Answer	Guidance
100	2 marks M1 110-10 A1 100 Allow 2 marks for answer only

Maths6MG5

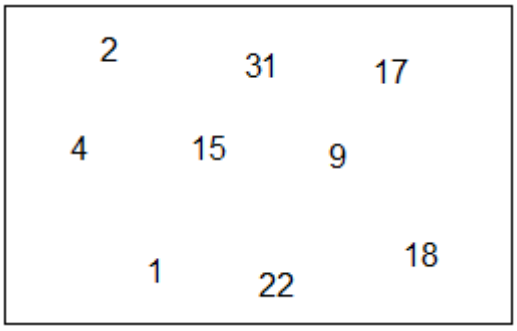
Item identity	AO1 marks	AO2 marks	C/N/E*	Content reference(s) from the learning ladder	Marks
Maths6MG5a	1		E	6N2a Number patterns: odd, even, multiples and prime numbers	1
Maths6MG5b	1		E	6N2c Prime factors and co-prime numbers	1
Maths6MG5c	1		E	6N2c Prime factors and co-prime numbers	1
Total marks	**3**				**3**

*C = Calculator required, N = Calculator not allowed, E = Either

Item purpose

The question assesses, recognizes and appreciates (through patterns) the broad classification of numbers as even, odd, prime, co-prime

Source(s)



Question(s)

1 The diagram shows a set of numbers.

1 (a) List all the prime numbers in the set.

(1 mark)

1 (b) Identify the number which is neither prime nor composite

(1 mark)

1 (c) List 2 numbers in the set that are co-prime with 22.

(1 mark)

(Total marks 3)

Mark scheme

1 (a) List out all the prime numbers from the circled numbers.	
Answer	Guidance
2,17,31	A1 2,17,31 Allow 1 mark for all correct answers only
1 (b) Identify the number which is neither prime nor composite	
Answer	Guidance
1	A1 1 only
1 (c) Find the sum of all odd primes from the circled numbers.	
Answer	Guidance
any two from 1, 9, 15, 17, 31	A1 any two from 1, 9, 15, 17, 31

Maths6AJ1

Item identity	AO1 marks	AO2 marks	C/N/E*	Content reference(s) from the learning ladder	Marks
Maths6AJ1		1	N	6N2b Highest common factor and lowest common multiple	1

*C = Calculator required, N = Calculator not allowed, E = Either

Item purpose

The question assesses the ability to apply HCF or LCM in a particular situation

Source(s)

Source information: book/journal, author, publisher, website link etc.

Question(s)

1 A set of flowers can be divided into bouquets of 18 or 24 flowers, with no flower remaining. What could be the smallest number of flowers in the set?

A. 24
B. 48
C. 72
D. 96

(1 mark)
(Total marks 1)

Mark scheme

1. A set of flowers can be divided into bouquets of 18 or 24 flowers, with no flower remaining. What could be the smallest number of flowers in the set? A. 24 B. 48 C. 72 D. 96	
Answer	Guidance
C. 72	LCM (18,24) = 72 Allow one mark for correct answer/option

Maths6AS3

Item identity	AO1 marks	AO2 marks	C/N/E*	Content reference(s) from the learning ladder	Marks
Maths6AS3	1		N	6N2b Highest common factor and lowest common multiple	1

*C = Calculator required, N = Calculator not allowed, E = Either

Item purpose

The question assesses the ability of students' to find the lowest common multiple.

Sources and diagrams

Source information if copied: book/journal, author, publisher, website link etc.

Question

1 The smallest positive number which is a multiple of both 40 and 50 is:

A. 10
B. 200
C. 400
D. 2000

(1 mark)

Mark scheme

1 The smallest positive number which is a multiple of both 40 and 50 is: A. 10 B. 200 C. 400 D. 2000	
Answer	Guidance
B. 200	1 mark Allow 1 mark for correct answer

Maths6AT7

Item identity	AO1 marks	AO2 marks	C/N/E*	Content reference(s) from the learning ladder	Marks
Maths6AT7a	2		N	6N4a Express two quantities as a ratio in its simplest form	2
Maths6AT7b		2	N	6N2b Highest common factor and lowest common multiple	2
Total marks	**2**	**2**			**4**

*C = Calculator required, N = Calculator not allowed, E = Either

Item purpose

The question assesses when and how to calculate highest common factor.

Source(s)

Source information: book/journal, author, publisher, website link etc.

Question(s)

1 Three rolls of wire have lengths 24 metres, 32 metres and 56 metres

1 (a) Find the ratio of the length of the longest roll to the shortest roll in simplest form.

(2 marks)

1 (b) Each roll is to be cut into pieces so that every piece is equal in length. Find the maximum length of each piece of wire.

(2 marks)

(Total 4 marks)

Mark scheme

1 (a) Find the ratio of the length of the longest roll to the shortest roll in simplest form.	
Answer	Guidance
7:3	M1 56 : 24 A1 7 : 3, allow $\frac{7}{3}$ $\frac{3}{7}$ Allow 2 marks for correct answer only. For 3 : 7 allow 1 mark
1 (b) Each roll is to be cut into pieces so that every piece is equal in length. Find the maximum length of each piece of wire.	
Answer	Guidance
8 metres	M1 Highest common factor is to be calculated OR expressing each number as a product of its factors A1 8 (metres)

Maths6SB2

Item identity	AO1 marks	AO2 marks	C/N/E*	Content reference(s) from the learning ladder	Marks
Maths6SB2	1		N	6N2c Prime factors and co-prime numbers	1

*C = Calculator required, N = Calculator not allowed, E = Either

Item purpose

The question assesses prime factors of numbers.

Sources and diagrams

Source information if copied: book/journal, author, publisher, website link etc.

Question

1 Find the number of common prime factors of 60, 75 and 100.

A. 1
B. 2
C. 3
D. 4

(1 mark)

Mark scheme

1. Find the number of common prime factors of 60, 75 and 105.

A. 1
B. 2
C. 3
D. 4

Answer	Guidance
A. 1	Accept only A or only 1 written as the answer. Award 1 mark for the correct answer.

Maths6AT4

Item identity	AO1 marks	AO2 marks	C/N/E	Content reference(s) from the learning ladder	Marks
Maths6AT4	1		N	6N3b Add and subtract positive decimals up to 4 digits	1

Item purpose

The question assesses simplification of decimals.

Source(s)

Source information: book/journal, author, publisher, ISBN, website address etc.

Question(s)

1 Find the simplified form of 8.1 + 17.096 – 9.98

A. 0.984
B. 7.197
C. 15.198
D. 15.216

(1 mark)

Mark scheme

1. Find the simplified form of 8.1 + 17.096 – 9.98 A. 0.984 B. 7.197 C. 15.198 D. 15.216	
Answer	Guidance
D. 15.216	1 mark for correct answer only

Maths6SB1

Item identity	AO1 marks	AO2 marks	C/N/E*	Content reference(s) from the learning ladder	Marks
Maths6SB1	1		N	6N3b Add and subtract positive decimals up to 4 digits	1

*C = Calculator required, N = Calculator not allowed, E = Either

Item purpose

The question assesses subtraction of positive decimals.

Sources and diagrams

Source information if copied: book/journal, author, publisher, website link etc.

Question

1 What needs to be subtracted from 436 to get 328.213?

A. 107.213
B. 107.787
C. 108.213
D. 108.787

(1 mark)

Mark scheme

1. What needs to be subtracted from 436 to get 328.213? A. 107.213 B. 107.787 C. 108.213 D. 108.787

Answer	Guidance
B. 107.787	Accept only B. or only 107.787 Award 1 mark for the correct answer

Maths6HK4

Item identity	AO1 marks	AO2 marks	C/N/E*	Content reference(s) from the learning ladder	Marks
Maths6HK4	1		N	6N3d Divide decimals up to 3 significant figures by positive integers up to 2 digits	1

*C = Calculator required, N = Calculator not allowed, E = Either

Item purpose

The question assesses division by a power of 10

Source(s)

Source information: book/journal, author, publisher, website link etc.

Question(s)

1 4999 ÷ 100 is equal to:

A. 0.4999
B. 4.999
C. 49.99
D. 499.9

(1 mark)
(Total marks 1)

Mark Scheme

1 4999 ÷ 100 is equal to A. 0.4999 B. 4.999 C. 49.99 D. 499.9	
Answer	Guidance
C. 49.99	1 mark M1 No mark A1 1 No half marks Allow 1 mark for answer only

Maths6AJ3

Item identity	AO1 marks	AO2 marks	C/N/E*	Content reference(s) from the learning ladder	Marks
Maths6AJ3	1		N	6N3e Convert between fractions and decimals	1

*C = Calculator required, N = Calculator not allowed, E = Either

Item purpose

The question assesses conversion of fraction into decimal.

Source(s)

Source information: book/journal, author, publisher, website link etc.

Question(s)

1 Which of the following is equivalent to $\frac{578}{578}$?

A. 5.78
B. 5.8
C. 5.875
D. 57.8

(1 mark)
(Total marks 1)

Mark scheme

1 Which of the following is equivalent to $\frac{578}{578}$? A. 5.78 B. 5.8 C. 5.875 D. 57.8	
Answer	Guidance
C. 5.875	Allow one mark for correct answer.

Maths6GK3

Item identity	AO1 marks	AO2 marks	C/N/E*	Content reference(s) from the learning ladder	Marks
Maths6GK3	1		N	6N3e Convert between fractions and decimals	1

*C = Calculator required, N = Calculator not allowed, E = Either

Item purpose

The question assesses the application of concept of fraction to decimals.

Source(s)

Source information: book/journal, author, publisher, website link etc.

Question(s)

1 Write the fraction $\frac{11}{3}$ as a decimal. Give your answer to 2 decimal places.

(1 mark)
(Total marks 1)

Mark scheme

1 Write the fraction $11\frac{3}{11}$ as a decimal. Give your answer to 2 decimal places	
Answer	Guidance
3.33	1 mark for correct answer.

Maths6KK6

Item identity	AO1 marks	AO2 marks	C/N/E*	Content reference(s) from the learning ladder	Marks
Maths6KK6a	2		N	6N3g Add and subtract fractions and mixed numbers	2
Maths6KK6b	2		N	6N3g Add and subtract fractions and mixed numbers	2
Total marks	**2**				**4**

*C = Calculator required, N = Calculator not allowed, E = Either

Item purpose

The question assesses the student's ability to solve problems using of fractions.

Source(s)

Source information: book/journal, author, publisher, website link etc.

Question(s)

1 Calculate the following. Give your answers it simplest form.

1 (a) $\frac{5}{6}+\frac{2}{9}$

(2 marks)

1 (b) $5\frac{3}{4}-1\frac{3}{8}$

(2 marks)

(Total marks 3)

Mark scheme

1 (a) $\frac{5}{6}+\frac{2}{9}$	
Answer	Guidance
$\frac{11}{18}$	M1 $\frac{15}{18}+\frac{4}{18}$ A1 $\frac{19}{18}$ OR $\frac{11}{18}$

1 (b) 534−138534−138	
Answer	Guidance
438438	M1 4 68−3868−38 A1 438438

Maths6AS6

Item identity	AO1 marks	AO2 marks	C/N/E*	Content reference(s) from the learning ladder	Marks
Maths6AS6a	2		N	6N4a Express two quantities as a ratio in its simplest form	2
Maths6AS6b	3		N	6N4c Use the unitary method and direct proportion	3
Total marks 5	**5**				**5**

*C = Calculator required, N = Calculator not allowed, E = Either

Item purpose

The question assesses the understanding of ratio and proportion.

Source(s)

Source information: book/journal, author, publisher, website link etc.

Question(s)

1 On the occasion of Aled's birthday, his mother decided to bake a cake for him, which requires flour and sugar to be added in a fixed ratio.

1 (a) If she added 1 kg flour and 500 g of sugar in the cake, find the ratio of quantity of flour to that of sugar in the simplest form.

(2 marks)

1 (b) The ratio of sugar to butter needed is 5 : 4
Complete the following table which shows some possible quantities of sugar and butter to be added to the cake.

Quantity of sugar	500 g		
Quantity of butter		300 g	2 kg

(3 marks)

(Total marks 5)

Mark scheme

1 On the occasion of Aled's birthday, his mother decided to bake a cake for him, which requires flour and sugar to be added in a fixed ratio.

1 (a) If she added 1 kg flour and 500 g of sugar in the cake, find the ratio of quantity of flour to that of sugar in the simplest form.

Answer	Guidance
2:1	M1 converting both quantities into the same unit Quantity of flour =1 kg i.e 1000 g Quantity of sugar = 500 g OR Quantity of flour = 1 kg Quantity of sugar = 0.5 kg A1 = 2:1 A2 for answer only

1 (b) From the derived ratio, complete the following table which shows some possible quantities of sugar and butter that can be added to a cake.

Quantity of sugar	500 g		
Quantity of butter		300 g	2 kg

Answer				Guidance
Quantity of sugar	500 g	375 g	2.5 kg	A1 400 g butter Allow units omitted A1 375 g sugar Allow units omitted A1 2.5 kg OR 2500 g of sugar. Units required Allow answers in table or separately
Quantity of butter	400 g	300g	2 kg	

Maths6AJ4

Item identity	AO1 marks	AO2 marks	C/N/E*	Content reference(s) from the learning ladder	Marks
Maths6AJ4		1	N	6N4b Divide a quantity in a given ratio	1

*C = Calculator required, N = Calculator not allowed, E = Either

Item purpose

The question assesses comparing of quantities using ratios

Source(s)

Source information: book/journal, author, publisher, website link etc.

Question(s)

1 A piece of wire 56 cm long is to be divided into two parts in the ratio of 2:5. What will be the length of each part?

A. 16 cm and 40 cm
B. 18 cm and 38 cm
C. 20 cm and 36 cm
D. 20 cm and 50 cm

(1 mark)

(Total marks 1)

Mark scheme

1 A piece of wire 56 cm long is to be divided into two parts in the ratio of 2:5. What is the possible length of each part? A. 16 cm and 40 cm B. 18 cm and 38 cm C. 20 cm and 36 cm D. 20 cm and 50 cm	
Answer	Guidance
A. 16 cm and 40 cm	Allow 1 mark for correct answer (A)

Maths6SB6

Item identity	AO1 marks	AO2 marks	C/N/E*	Content reference(s) from the learning ladder	Marks
Maths6SB6		2	N	6N4b Divide a quantity in a given ratio	2

*C = Calculator required, N = Calculator not allowed, E = Either

Item purpose

The question assesses dividing a quantity in the given ratio.

Sources and diagrams

Source information if copied: book/journal, author, publisher, website link etc.

Question

1. Two friends Reema and Seema started a business with an investment of Rs. 80,000. The ratio of their investments is 9:7 respectively. Find the amount invested by

each of
them.

(2 marks)

Mark scheme

1 Two friends Reema and Seema started a business with an investment of Rs. 80,000. The ratio of their investments is 9:7 respectively. Find the amount invested by each of them.	
Answer	Guidance
Reema invested Rs. 45000 and Seema invested Rs. 35000.	**M1:** Let the common factor be x Amount invested by Reema is 9x and Seema is 7x. So 9x + 7x = 80000 i.e. 16x=80000 **OR** Reema invested $\frac{9}{16}$ $\frac{9}{16}$ and Seema invested $\frac{7}{16}$ $\frac{7}{16}$ of the total amount which is Rs. 80,000 Award 1 mark for this method or equivalent. **A1:** Award 1 mark for only the correct answer.

Maths6GK4

Item identity	AO1 marks	AO2 marks	C/N/E*	Content reference(s) from the learning ladder	Marks
Maths6GK4a	1		C	6N4c Use the unitary method and direct proportion	1
Maths6GK4b		2	C	6N4c Use the unitary method and direct proportion	2
Total marks	**1**	**2**			**3**

*C = Calculator required, N = Calculator not allowed, E = Either

Item purpose

The question assesses use of the unitary method

Source(s)

Source information: book/journal, author, publisher, website link etc.

Question(s)

1 The cost of 3 dozen pencils is Rs 135.

1 (a) Find the cost of 2 dozen pencils.

(1 mark)

1 (b) How many pencils can be bought from Rs 206.25? Show your workings.

(2 marks)

(Total marks 3)

Mark scheme

1 (a) Find the cost of 1 dozen pencils by unitary method.	
Answer	Guidance
Rs 90	M1 Cost of 2 dozen pencils =135÷3 x 2 OR 135÷ 36 x 24 A1 Rs 90
1 (b) How many pencils can be bought from Rs 206.25 ?	
Answer	Guidance
55 Pencils	M1[Equation] OR 1 pencil costs 135 ÷ 3 AND 206.25 ÷ their cost of one pencil OR equivalent A1 55 (Pencils)

Maths6MG2

Item identity	AO1 marks	AO2 marks	C/N/E*	Content reference(s) from the learning ladder	Marks
Maths6MG2		1	N	6N4c Use the unitary method and direct proportion	1

*C = Calculator required, N = Calculator not allowed, E = Either

Item purpose

The question assesses the usage of unitary method in solving various word problems.

Source(s)

Source information: book/journal, author, publisher, website link etc.

Question(s)

1 Seema bought 3m cloth for Rs 105. What is the cost of one metre of cloth?

(1 mark)

(Total marks 1)

Mark scheme

1 Seema bought 3m cloth for Rupees 105. What is the cost of one metre of cloth?	
Answer	Guidance
Rs 35	A1 (Rs) 35

Maths6AS7

Item identity	AO1 marks	AO2 marks	C/N/E*	Content reference(s) from the learning ladder	Marks
Maths6AS7a		3	E	6S1a Organise data: frequency table and tally marks	3
Maths6AS7b	1		E	6S1a Organise data: frequency table and tally marks	1
Maths6AS7c	1		E	6S1a Organise data: frequency table and tally marks	1
Total marks	2	3			5

*C = Calculator required, N = Calculator not allowed, E = Either

Item purpose

The question assesses the data handling skills of students.

Source(s)

Source information: book/journal, author, publisher, website link etc.

Question(s)

1 In a Mathematics test, the following marks were obtained by 40 students:

6	8	5	9	8	2	4	8	3	7
7	2	5	6	1	7	3	5	9	4
2	4	4	5	5	6	7	3	1	8
7	4	5	6	9	6	4	4	6	6

1 (a) Arrange these marks in a frequency table using tally marks.

(3 marks)

1 (b) Find how many students obtained marks equal to or more than 6.

(1 mark)

1 (c) How many marks were obtained by the maximum number of students?

(1 mark)

(Total marks 5)

Mark scheme

1.In a Mathematics test, the following marks were obtained by 40 students.

6	8	5	4	8	2	4	8	3	7
7	2	5	6	1	7	3	5	9	4

2	4	4	5	5	6	7	3	1	8
7	4	5	6	9	6	4	4	6	6

1 (a) Arrange these marks in a frequency table using tally marks.

Answer			Guidance
Mark	Tally mark	Number of students	M1 correct use of tally marks M1 correct form of frequency table A1 table correct. Allow up to 2 errors for number of students
1	II	2	
2	III	3	
3	III	3	
4	IIII III	8	
5	IIII I	6	
6	IIII II	7	
7	IIII	5	
8	IIII	4	
9	II	2	

1 (b) Find how many students obtained marks equal to or more than7.

Answer	Guidance
18 (7 + 5 + 4 + 2 = 18)	1 mark A1 1 Allow 1 mark for correct answer

1 (c) How many marks were obtained by the maximum number of students?

Answer	Guidance
4	1 mark A1 1 Allow 1 mark for correct answer

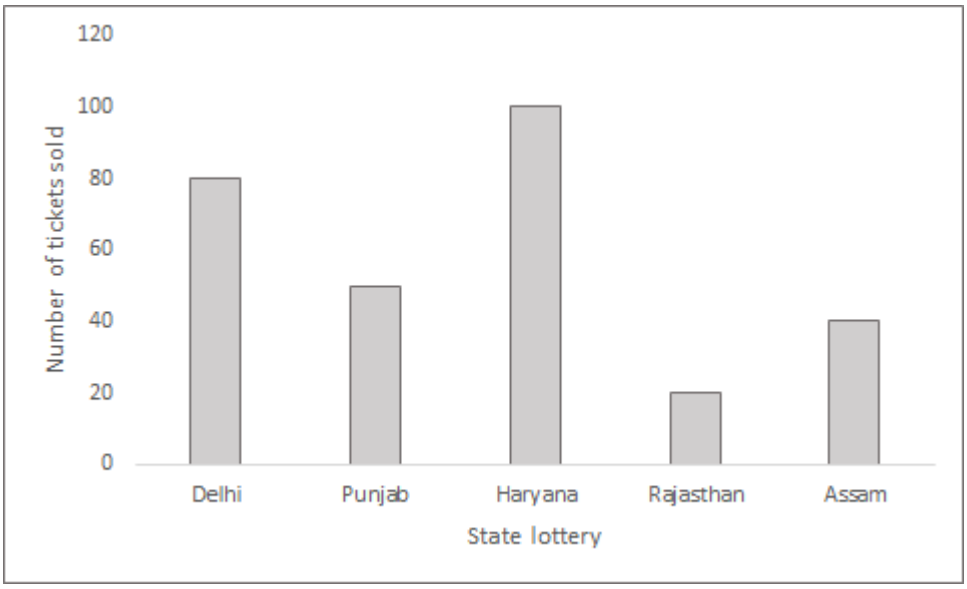
Maths6AT5

Item identity	AO1 marks	AO2 marks	C/N/E	Content reference(s) from the learning ladder	Marks
Maths6AT5		1	N	6S2a Draw and interpret pictographs and bar charts for discrete data	1

Item purpose

The question assesses interpretation of a bar chart.

Source(s)



Source information: Excel

Question(s)

1 The given bar graph represents the number of tickets of different state lotteries sold by an agent in a day.
Calculate the difference of maximum and minimum numbers of tickets sold:

A. 20
B. 30
C. 50
D. 80

(1 mark)
(Total marks 1)

Mark scheme

1 The given bar graph represents the number of tickets of different state lotteries sold by an agent in a day. Calculate the difference of maximum and minimum numbers of tickets sold. A. 20 B. 30 C. 50 D. 80	
Answer	Guidance
D. 80	1 mark for correct answer only