

Acknowledgements

Patrons

- Shri Dharmendra Pradhan, Minister of Education, Government of India.
- Dr. Rajkumar Ranjan Singh, Minister of State for Education, Government of India.
- Smt. Annpurna Devi, Minister of State for Education, Government of India.
- Dr. Subhas Sarkar, Minister of State for Education, Government of India.
- Ms. Anita Karwal, IAS, Secretary, Department of School Education and Literacy, Ministry of Education, Government of India.

Advisory Inputs

- Sh. Manoj Ahuja, IAS – We express our gratitude for his guidance in the development of this resource material during his tenure as Chairman, Central Board of Secondary Education.
- Dr. Vineet Joshi, IAS, Chairman, Central Board of Secondary Education.

Guidance and Support

- Dr. Joseph Emmanuel, Director (Academics), Central Board of Secondary Education.

Co-ordination

- Dr. Sweta Singh, Joint Secretary (Academics), Central Board of Secondary Education.

Content Development

- Sri Aurobindo Society, New Delhi
- Australian Council for Educational Research (ACER), New Delhi.

Content Review

- Dr. Sweta Singh, Joint Secretary (Academics), Central Board of Secondary Education.
- Ms. Anjali Chhabra, Deputy Secretary, Central Board of Secondary Education.
- Teachers of:
 - Delhi Public School, Sector 40, Chandigarh
 - St John's High School, Sector 26, Chandigarh
 - DAV Model School, Sector 15, Chandigarh

Curriculum Aligned Competency Based Test Items

Class 6

Foreword

The National Education Policy (2020), Government of India, envisions transforming school education by equipping students with 21st century skills. The endeavour is to shift focus from rote-learning to acquisition of competencies with a resolve to make education more meaningful and relevant.

The Central Board of Secondary Education (CBSE) in its continuous endeavour to improve the quality of education has already introduced some initiatives in this direction. Strengthening these efforts, the Board had signed an MoU with Sri Aurobindo Society (SAS), Pondicherry in November 2019. As a part of this initiative, SAS is supporting CBSE to develop resource materials, train teachers and take other measures that would facilitate adoption of Competency Based Education in schools. SAS has engaged with Australian Council for Educational Research (ACER) as its knowledge partner for this project.

CBSE, in collaboration with SAS and ACER, has prepared this resource material- ***Curriculum Aligned Competency Based Test Items (Class 6)*** in February, 2022 which is a compilation of assessment items in Mathematics that are aligned to the NCERT/CBSE curriculum. These tasks based on authentic real life situations focus on developing critical understanding among learners in the discipline. Each test covers about 10 questions from a chapter. The assessments, useful for students' practice, are also exemplars for teachers who with their ingenuity can develop many similar items.

— Team CBSE

About CBSE

The Central Board of Secondary Education (CBSE) is a national Board under the Ministry of Education, Government of India. The Board has more than 27,000 schools affiliated to it in India and overseas, in 25 countries. These include the Kendriya Vidyalayas, the Jawahar Navodaya Vidyalayas, schools run by Central Government organizations such as The Army, Navy, Air Force etc., schools run or aided by the State Governments and independent private schools. The Board's mission is to encourage quality of education focussed on holistic development of learners. It motivates schools and teachers to adopt learner centric enquiry-based pedagogies and use innovative methods to achieve academic excellence. The Board is committed to providing a stress-free learning environment to develop competent and confident students who emerge as enterprising citizens of tomorrow, promoting harmony and peace in the world.

About SAS

Sri Aurobindo Society (SAS) is an international, spiritual, and cultural, not-for-profit NGO. SAS has been recognised by the Government of India as a Charitable Organisation, a research institute and an institute of national importance. Sri Aurobindo Society has more than 300 centres and branches across the country, with its head office in Puducherry. SAS is setting up models, centers of excellence and training institutions that are sustainable, scalable and replicable in the country.

About ACER

Australian Council for Educational Research (ACER) is a leading and pioneer international organization working in the field of competency based learning. ACER has been instrumental in coordinating a consortium of international organizations for the implementation of the Programme for International Students Assessment survey in 2000, 2003, 2006, 2009 and 2012.

Table of Contents

► Test Item

1	Knowing Our Numbers.....	03
2	Whole Numbers.....	07
3	Playing with Numbers	12
4	Basic Geometrical Ideas	15
5	Understanding Elementary Shapes	19
6	Integers.....	23
7	Fractions.....	27
8	Decimals.....	31
9	Data Handling	34
10	Mensuration.....	38
11	Algebra.....	42
12	Ratio and Proportion.....	45
13	Symmetry	49
14	Practical Geometry	54

Scoring Key

1	Knowing Our Numbers.....	59
2	Whole Numbers.....	62
3	Playing with Numbers	66
4	Basic Geometrical Ideas	69
5	Understanding Elementary Shapes	72
6	Integers.....	75
7	Fractions.....	78
8	Decimals.....	82
9	Data Handling	85
10	Mensuration.....	88
11	Algebra.....	91
12	Ratio and Proportion.....	94
13	Symmetry	97
14	Practical Geometry.....	100

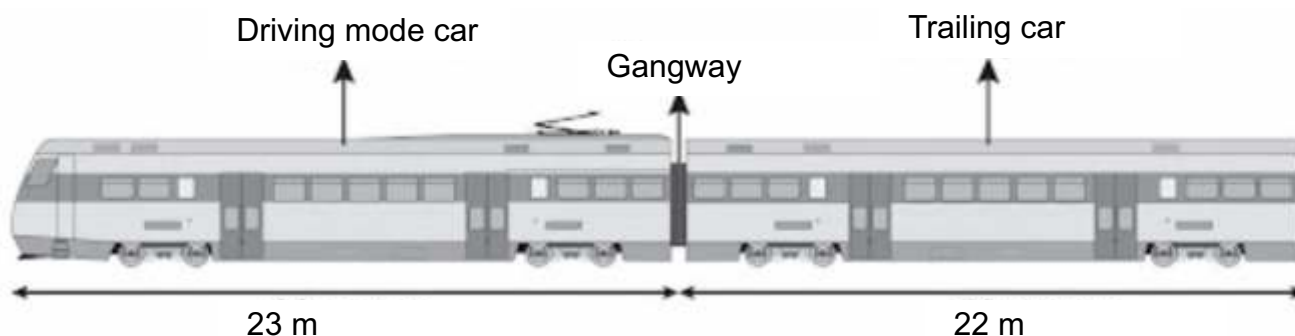
Curriculum Aligned Competency Based Test Items

Mathematics

Class 6 – Chapter 1

Knowing Our Numbers

The first and last coach of the metro train are Driving mode cars. The coaches in between are Trailing cars connected through Gangways. Gangways allow passenger movement between cars. This figure shows the dimensions of a Driving mode car and Trailing car along with Gangways.



SAS21M06Q0101

1 A train has six coaches. What is the length of the metro train?

- A. 45 metres
- B. 133 metres
- C. 134 metres
- D. 135 metres

SAS21M06Q0102

2 In the 6 coach metro train, each coach has 50 seats for passengers. The first coach is reserved for women. Sixteen seats are reserved for women and senior citizens in each of the remaining coaches. How many unreserved passenger seats are in the metro train?

- A. 130
- B. 170
- C. 204
- D. 300

SAS21M06Q0103

- 3** On an average, a metro train completes 4 round trips of 90 kilometres in a day. What is the average distance travelled by the metro?

Passengers need a metro token to board a train. The cost of the token depends upon the distance travelled in different zones. Different zones represents different metro networks. The table below shows the cost of tokens for travelling in different zones of a metro.

Zone	Sub-zone	Fare	Distance (in kilometre)	Time limit (in minutes)
Zone 1	1	₹ 10	Less than 2	65
	2	₹ 20	2-5	
	3	₹ 30	5-12	
Zone 2	4	₹ 40	12-21	100
Zone 3	5	₹ 50	21-32	180
	6	₹ 60	More than 32	

The table below shows the number of passengers travelling on a particular day in different zones.

Zone	Sub-zone	Number of passengers travelled
Zone 1	1	90,000
	2	160,000
	3	110,000
Zone 2	4	250,000
Zone 3	5	150,000
	6	100,000

SAS21M06Q0104

- 4** How much revenue was generated on that day in Zone-1?

SAS21M06Q0105

- 5 Which zone generated the highest revenue on that day?

Siya and Aman are playing with 0-9 number cards. They placed seven cards in a row.



SAS21M06Q0106

- 6 In how many different ways can they place the rest of the cards?

Siya and Aman reshuffle the cards and divide them equally. Aman makes a 5-digit number using his cards. The picture shows the number formed by Aman.



Siya placed four of her cards as shown in the picture below.



SAS21M06Q0107

- 7 Where should she place the remaining card to form a number greater than the number formed by Aman?
- After 9
 - Before 0
 - Between 5 and 7
 - Between 7 and 9

In a school, 700 students avail the school's transport services. The transport manager of the school prints a monthly transport record. The printed record is shown below.

Distance (in kilometres)	Monthly transport fees	Number of students	Total cost
Less than 5		400	₹ 200,000
5 – 10	₹ 800	200	₹ 160,000
More than 10	₹ 1000	100	₹ 100,000

SAS21M06Q0108

- 8 An entry is omitted in the record. What are the monthly transport fees for a distance of less than 5 kilometres? Show your calculation.

SAS21M06Q0109

- 9 In class 6 of a school, 105 students study in different sections. The number of students in each section are between 20 and 40. All sections have equal number of students. How equal number of students can be accommodated in each section?

SAS21M06Q0110

- 10 The school authority plans to install new water coolers. There are 1800 students in the school. A water cooler can serve 100 students. The cost of one water cooler is ₹ 40,000. How many water coolers are should be installed to serve all the students? What is the cost of installing them?

Curriculum Aligned Competency Based Test Items

Mathematics

Class 6 – Chapter 2

Whole Numbers

Amisha wants to buy some items. Given below is the list of items with their prices as provided by the shopkeeper.

Rice - 5 kg.....	350/-
Tuar dal - 2 kg.....	250/-
Cookies - 1 packet.....	100/-
peanuts - 2 kg.....	120/-
Almonds - 1 kg.....	600/-
Sugar - 3 kg.....	220/-
Salt - 1 packet.....	45/-
Jaggery - 2 kg.....	100/-
Tea - 1 packet.....	50/-

SAS21M06Q0201

- 1 Amisha pays Rs 1785 for the items.
Is the amount paid by Amisha correct? Justify your answer.

SAS21M06Q0202

- 2 What is the price of the rice per kilogram that Amisha purchased?

Jai finds the cost of tea, jaggery and salt this way.

$$50 + 100 = 150$$

Diya finds the cost of the same items this way.

$$150 + 45 = 195$$

$$50 + 45 = 95$$

$$95 + 100 = 195$$

SAS21M06Q0203

- 3 The fact that they both got the same final amount is proof of which property of addition?

SAS21M06Q0204

- 4 Amisha buys three 1 kg packets of sugar. The MRP mentioned on each packet is Rs 55.00. Did the shopkeeper charge extra for the sugar? Justify your response.

Sunil purchases these four items from the shopkeeper. The items along with their cost are given below.

Surface disinfectant – 1 bottle ----- Rs 120

Dishwash liquid – 1 sachet ----- Rs 30

Cooking oil – 5 litres ----- Rs 550

Cheese – 1 packet ----- Rs 150

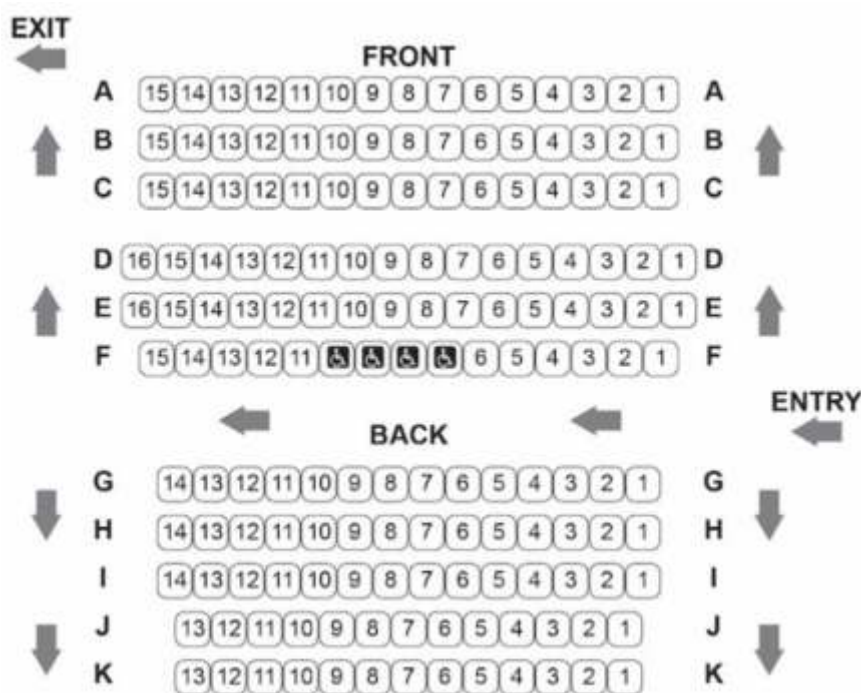
Sunil gives two notes of Rs 500 to the shopkeeper.

SAS21M06Q0205

- 5 How many rupees should the shopkeeper return?

A cinema hall is divided into two sections: back and front. The cost of tickets depends on the location of the seat in each section.

The seating layout of the cinema hall is shown below.



Four seats in Row F are reserved for the disabled.

SAS21M06Q0206

- 6 Which of the following calculations does not show the number of seats in the back section of the cinema hall?

- A. $14 \times 5 - 1 - 1$
- B. $13 \times 5 + 1 + 1 + 1$
- C. $(14 + 13) \times 5$
- D. $14 \times 3 + (13 \times 2)$

SAS21M06Q0207

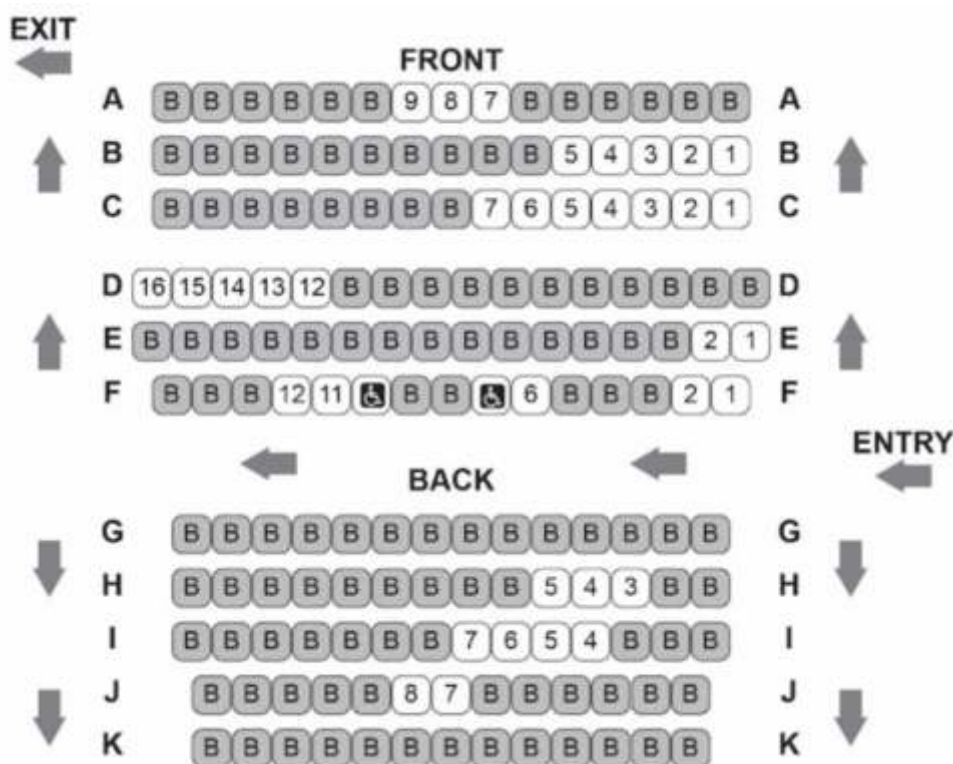
- 7 Joy and Sid are seated in Row J.
Each person is seated at the same distance from the wall.
What could be their seat numbers?

The table below shows the cost of a ticket for different seats.

Seats	Cost (in Rupees)
A1 – C15	200
D1 – F15 (excluding F7, F8, F9 and F10)	250
G1– I14	350
J1 – K13	450

The cost of a ticket for a seat for the disabled  is ₹ 200.

The display at the ticket counter marks the booked seats as B and displays numbers only for the vacant seats. This display shows the status at the end of booking for an evening show.



SAS21M06Q0208

8 Which calculation shows the total amount collected by selling the tickets for the evening show?

- A. $[(200 \times 30) + (250 \times 33) + (350 \times 35) + (450 \times 24)]$
- B. $[(200 \times 45) + (250 \times 47) + (350 \times 42) + (450 \times 26)]$
- C. $[(200 + 32) + (250 + 33) + (350 + 35) + (450 + 24)]$
- D. $[(200 \times 32) + (250 \times 31) + (350 \times 35) + (450 \times 24)]$

Ritesh and his wife book seats H13 and H14 for a show.
They order some snacks from the menu below.

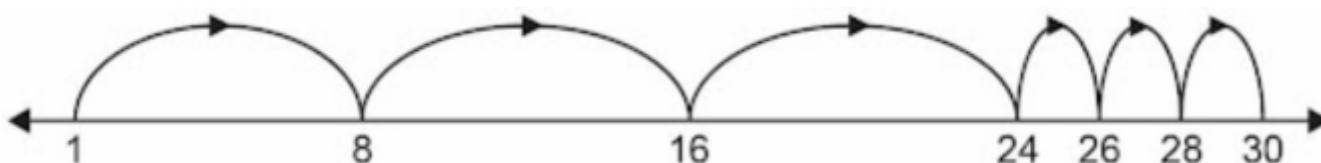


Altogether, they spend ₹ 1280 including the cost of tickets.

SAS21M06Q0209

9 Which snacks could they have ordered?

The numbers shown on the number line make a pattern.



SAS21M06Q0210

10 Which of the following shows the operation of addition on the given number line?

- A. $3 \times (8 + 2)$
- B. $6 \times (8 + 2)$
- C. $8 + 16 + 24 + 26 + 28 + 30$
- D. $6 \times 8 \times 2$

Curriculum Aligned Competency Based Test Items

Mathematics

Class 6 – Chapter 3

Playing with Numbers

A photographer is hired to take group photographs of students in each class in a school. He arranges the students along with teachers in rows for the photograph. His arrangement has

- at most 50 people
- an equal number of people in each row

A row consists of a minimum of 3 people and a maximum of 8 people.

SAS21M06N0301

- 1 There are 35 people (students and teachers) in a class for a group photograph. What are the possible arrangements for them?

SAS21M06N0302

- 2 The photographer arranged some of the students in 6 rows. What can be the maximum number of students in the photograph?

- A. 18
B. 36
C. 48
D. 60

SAS21M06N0303

- 3 How did The students of Class 7 which are 30 in number want to take a photograph along with 2 teachers. Which of the following is the possible arrangement for them?

- A. 2 rows with 16 students in each
B. 4 rows with 8 students/teachers in each
C. 5 rows with 6 students in each and 1 row for teachers
D. 6 rows with 4 students in each and 1 row for teachers

Photographs are sold in small, medium and large sizes. The cost of photographs according to their size is given in the table below:

Photograph size	Cost (Rs.)
Small	50
Medium	80
Large	100

SAS21M06N0304

- 4** 150 photographs worth Rs. 10,250 were sold. If 75 of them were of small size, find how many large size photographs were sold?

- A. 14
- B. 25
- C. 75
- D. 130

SAS21M06N0305

- 5** Which of the following number is not a factor of 342?

- A. 2
- B. 3
- C. 6
- D. 12

SAS21M06N0306

- 6** Write co-prime pairs using the three consecutive numbers 13, 14 and 15.

SAS21M06N0307

- 7** For an international school competition, students' stay is booked in two hotels – 148 students in Hotel 1 and 164 students in Hotel 2. An equal number of students are accommodated in each hotel room. What can be the maximum number of students in a room?

SAS21M6N0308

- 8 John, Rishi and Feroz participated in track events. During practice sessions, their coach observed that John took 48 seconds, Rishi took 72 seconds and Feroz took 108 seconds to run around a circular track. If they start running together at 6 am for half an hour, how many times will they all come together at a same position?

SAS21M06N0309

- 9 Jaya baked muffins using paper liners and cherries. Some paper liner packets contain 8 liners, while others contain 10 liners. A packet of cherry contains 6 cherries. Every muffin Jaya baked contained 1 cherry. All cherries and paper liners were used up. What can be the minimum number of muffins baked by her?

- A. 40
- B. 94
- C. 120
- D. 240

SAS21M06N0310

- 10 Jaya baked and sold vanilla muffins at Rs. 15 and chocolate muffin at Rs. 18. She earned equal amounts from the sale of both muffins. How many vanilla and chocolate muffins did she sell?

Curriculum Aligned Competency Based Test Items

Mathematics

Class 6 – Chapter 4

Basic Geometrical Ideas

Joy learns the art of knitting from his grandmother.



SAS21M06S0401

1 Which of the following pictures can be an example of a line segment?

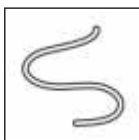
A.



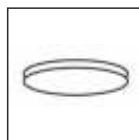
B.



C.



D.



SAS21M06S0402

2 How many lines can pass through a point?

SAS21M06S0403

3 Which of the following is an open curve?

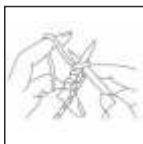
A.



B.



C.

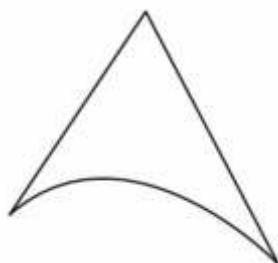


D.

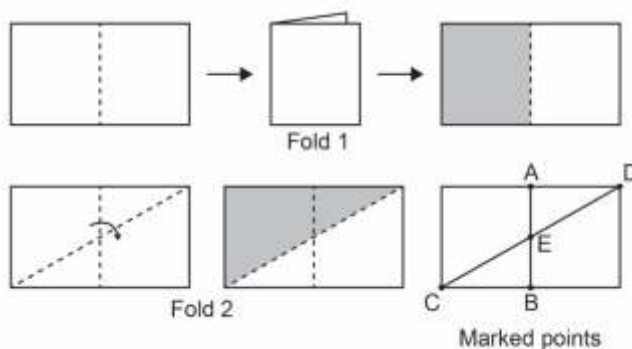


SAS21M06S0404

4 Why is the below figure not considered a polygon?



Ankit marks five points by folding a rectangular paper sheet as shown below:



SAS21M06S0405

5 Choose the right word and fill in the blank. CE is an example of _____.

- A. A ray
- B. An angle
- C. A point
- D. A line segment

SAS21M06S0406

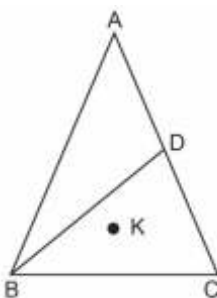
6 Fill in the blank with the correct word. A line segment is a _____ of a line.

SAS21M06S0407

7 Which of the following is not true for both a ray and a line?

- A. They have end points
- B. They have start points
- C. They have no thickness
- D. They can have infinite length

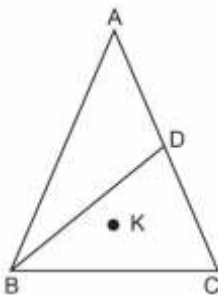
Look at the triangle given below.



SAS21M6S0408

8 Mahesh claims, 'BD is the common side for triangle ABD and triangle BCD'. Is he correct? Justify your answer.

Where does the point K lie?

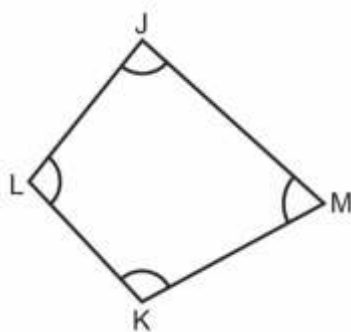


SAS21M06S0409

9 Where does the point K lie?

- A. Exterior of triangle BDC
- B. Interior of triangle ABD
- C. Exterior of triangle ABC
- D. Interior of triangle BDC

JLKM is a quadrilateral.



SAS21M06S0410

10 Which of the following is true for the quadrilateral JLKM?

- A. $\angle J$ is adjacent to $\angle K$
- B. $\angle J$ is opposite to $\angle M$
- C. Side JL is opposite to side MK
- D. Side KL is adjacent to side JM

Curriculum Aligned Competency Based Test Items

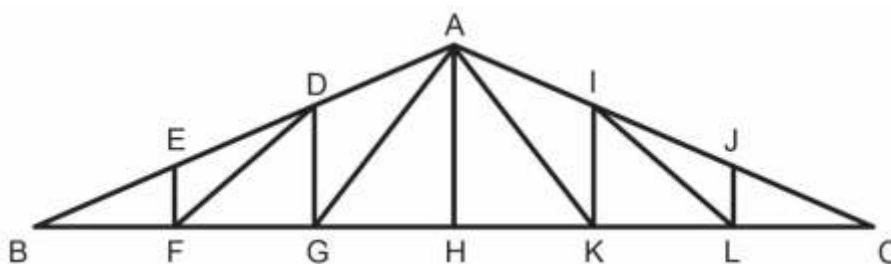
Mathematics

Class 6 – Chapter 5

Understanding Elementary Shapes

A truss is a structural framework of wood or metal arranged in a pattern which is used to support roofs or bridges.

The structure of a truss made of iron rods is shown in the figure below.



The rods EF, DG, AH, IK and JL are perpendicular to the base BC. A number of triangles are formed by the rods. In the triangle ABC, side $AB = AC$. In the triangle AGK, all sides are equal and H is the mid-point of GK.

SAS21M06S0501

1 Which type of triangle is ABC?

- A. Scalene
- B. Isosceles
- C. Equilateral
- D. Right-angled triangle

SAS21M06S0502

2 Is triangle DGF a right-angled triangle? Justify your answer.

SAS21M06S0503

- 3 Is AH the perpendicular bisector of line segment GK? Justify your answer.

SAS21M06S0504

- 4 The sides of triangle IJL are of length 3 m, 4 m and 5 m.
Is triangle IJL an isosceles triangle? Why?

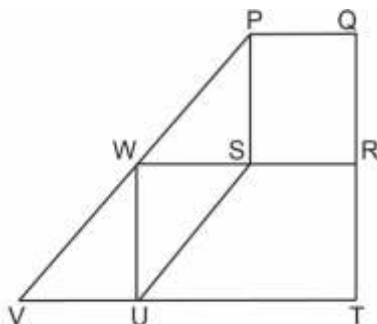
The figure given below shows a tyre of a bicycle.



SAS21M06S0505

- 5 What type of angle does Spoke 1 make with Spoke 11?

The figure below shows a combination of shapes.



In the figure, US is parallel to WP and UV is parallel to QP.
PQRS is a square. WRTU is a rectangle. PSW and WUV are triangles.

SAS21M06S0506

- 6 Arun joins S and Q. SQ is an extension of US. Which type of quadrilateral is PQUV? Justify your answer.

SAS21M06S0507

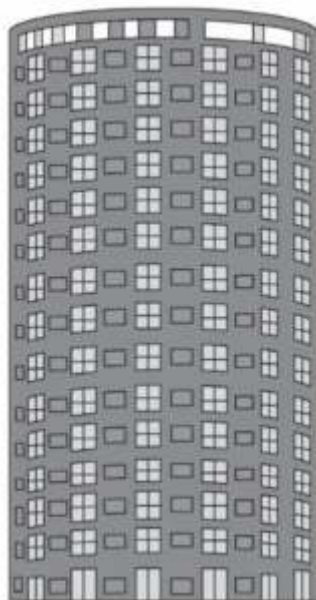
- 7 Which of the following quadrilaterals is regular?

- A. PQRS
- B. PSUV
- C. RWUT
- D. PQTV

SAS21M6S0508

- 8 Looking at the figure, Raji claims that, 'PWUS is a rhombus'. Do we have sufficient information to accept her claim? Justify your answer.

The figure below shows a building.



SAS21M06S0509

9 The figure below shows a building.

- A. Sphere
- B. Cylinder
- C. Triangular prism
- D. Rectangular pyramid

SAS21M06S0510

10 How many edge(s) are in a ball?

- A. 0
- B. 1
- C. 2
- D. 4

Curriculum Aligned Competency Based Test Items

Mathematics

Class 6 – Chapter 6

Integers

The level of the surface of oceans or seas is called the sea level. Land and hills are raised and are at some height from the sea level.
City A is 10 m below sea level, City B is 28 m below sea level and City C is 14 m above sea level.

SAS21M06N0601

- 1 Which of the three cities is at the highest elevation from the sea level?

SAS21M06N0602

- 2 Aditi uses the following rules to represent the elevation of different locations.
The sea level is considered to be zero elevation.
Below sea level is shown using the '-' sign.
Above sea level is shown using the '+' sign.
For example, the elevation of City A is shown as -10.
What would be the elevation of City B?

SAS21M06N0603

- 3 The elevation of City D is 1 m above the elevation of City B.
What is the elevation of City D?

SAS21M06N0604

- 4 A submarine at the depth of 45 m rises to 20 m below sea level.
What is the depth of the submarine after rising?

SAS21M06N0605

- 5 A diver at the depth of 60 m spotted a seaweed 23 m below him.
What is the depth of the seaweed from the sea level?

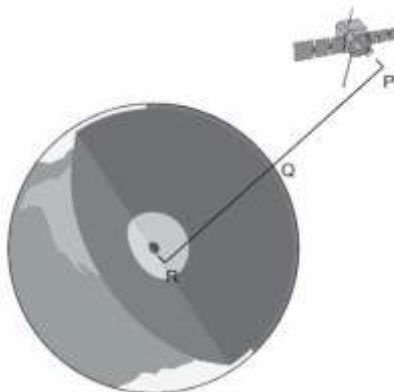
SAS21M06N0606

- 6 $8 - 8 = 0$ Which of the following is true for the numbers shown above?

- A. -8 is a multiplicative inverse of 8.
- B. -8 is a multiplicative identity of 8.
- C. -8 is the additive identity of 8.
- D. -8 is the additive inverse of 8.

The figure shows the position of the satellite above earth.

PR is the line joining the satellite and the centre of earth. P is the position of the satellite, Q is a point on the surface of earth and R is the centre of earth.



The distance between P and Q is 1300 km and the distance between the centre of earth and the satellite is 7671 km.

SAS21M06N0607

7 What is the distance between the points Q and R?

- A. 1300 km
- B. 6371 km
- C. 7671 km
- D. 8971 km

SAS21M06N0608

8 Shobhit marks Q as zero and the direction from Q to P is positive. What is the distance of R with reference to P?

The picture below shows the control panel of a lift in a mall.



'0' is the ground floor. The two-wheeler parking area '-1' is at basement level 1 and the car parking area '-2' is at basement level 2.

SAS21M06N0609

- 9 Ahmed enters the lift at Floor 3 and exits at the two-wheeler parking area. How many floors did the lift go down?

SAS21M06N0610

- 10 Meera entered the lift at the car parking floor. She pressed '6' on the control panel of the lift. How many floors up does she want to go?

Curriculum Aligned Competency Based Test Items

Mathematics

Class 6 – Chapter 7

Fractions

Cross country is a running event in which runners completed a pre-decided distance. It includes different activities in which runners cover different environments. A cross country running event of 11 km is as follows.

Activity	Distance (in km)
Running on paved road	3
Running on unpaved road	2
Hill climbing	2
Mud run	1
Running in woods	2
Crossing water bodies	1

SAS21M06N0701

1 What fraction of the total distance is the mud run?

- A. $\frac{11}{1}$
- B. $\frac{1}{10}$
- C. $\frac{1}{11}$
- D. $\frac{1}{12}$

SAS21M06N0702

2 What fraction of the total distance is the distance covered on paved and unpaved roads?

- A. $\frac{3}{2}$
- B. $\frac{5}{5}$
- C. $\frac{5}{6}$
- D. $\frac{5}{11}$

SAS21M06N0703

3 Paul says, 'By running through woods and climbing hills, half of the total distance in cross country can be covered.' Is Paul correct? How did you reach the conclusion?

Katherine completed the cross country in 1 hr. She completed the run on the paved and unpaved roads in one-fourth of an hour while Juliana covered it in half an hour.

SAS21M06N0704

4 In how many minutes did Katherine cover the distance on the paved and unpaved roads?

- A. 10 min
- B. 15 min
- C. 20 min
- D. 30 min

SAS21M06N0705

5 How much more time (in hrs) was taken by Juliana than Katherine?

SAS21M06N0706

- 6 Katherine took the same amount of time to cover every kilometre in the event.
Is the statement correct? Justify your answer.

Parul and two of her friends share a pizza equally among themselves.



SAS21M06N0707

- 7 Parul says, 'Here are three equal halves of the pizza.'
Is Parul's statement correct? Give reasons.

SAS21M06N0708

- 8 Which fraction represents one part of the whole pizza?

- A. $\frac{1}{2}$
B. $\frac{1}{3}$
C. $\frac{2}{3}$
D. $\frac{3}{3}$

Later, three more friends join Parul.
Parul divides the pizza again to have 6 parts.



SAS21M06N0709

9 Does everyone get an equal portion? Give reasons.

SAS21M06N010

10 Suggest a way to divide the pizza into six equal parts.



Curriculum Aligned Competency Based Test Items

Mathematics

Class 6 – Chapter 8

Decimals

Suraj provides laundry services to nearby areas. The charges for wash and fold are calculated per kilogram of the weight of the clothes.

The table below shows the weight of the clothes for washing and folding from four houses.

House Number	Weight of Clothes Collected (in kg)
216	5.60
324	3.95
159	7.37
228	6.72

SAS21M06N0801

1 Which house will pay the most?

- A. House number 216
- B. House number 324
- C. House number 159
- D. House number 228

SAS21M06N0802

2 What is the total weight of the clothes collected for washing and folding?

SAS21M06N0803

- 3** Suraj collected 30.50 kg of clothes on Tuesday and 25.48 kg of clothes on Wednesday. How many more kilograms of clothes were collected by Suraj on Tuesday than on Wednesday?

The picture shows the nutritional information on a packet of cookies.

NUTRITIONAL INFORMATION PER 100g (Approx.)	
Carbohydrate	70 g
Sugars	24.5 g
Protein	7 g
Fat	
Saturated Fatty Acids	9 g
Monounsaturated Fatty Acids	8.2 g
Polyunsaturated Fatty Acids	2.7 g
Trans Fatty Acids	0 g
Cholesterol	0 g
Energy	488kcal

The cookies contain four types of fat.

SAS21M06N0804

- 4** How much fat (in g) is in 100 g of cookies?

SAS21M06N0805

- 5** Which fat content is the highest in the cookies?

- A. Saturated fatty acids
- B. Monounsaturated fatty acids
- C. Polyunsaturated fatty acids
- D. Trans fatty acids

SAS21M06N0806

- 6 The sugar content in the cookies is more than three times the protein content. Do you agree with this statement? Give reasons.

Pulkit sets the car air-conditioner at 18.5°C when he starts the car. After a while, he increases the temperature to 21°C .

SAS21M06N0807

- 7 How much is the increment in the temperature?

SAS21M06N0808

- 8 Later, he increases the temperature to 24.5°C . What is the total change in temperature?

SAS21M06N0809

- 9 $160.3\text{ cm} =$ _____

- A. $160\text{ cm} + 3\text{ cm}$
B. $160\text{ cm} + 3\text{ mm}$
C. $160\text{ m} + 3\text{ cm}$
D. $160\text{ mm} + 3\text{ cm}$

SAS21M06N0810

- 10 Ritesh's height is 162.9 cm and Aarav's height is 163.2 cm . What is the difference between their heights?

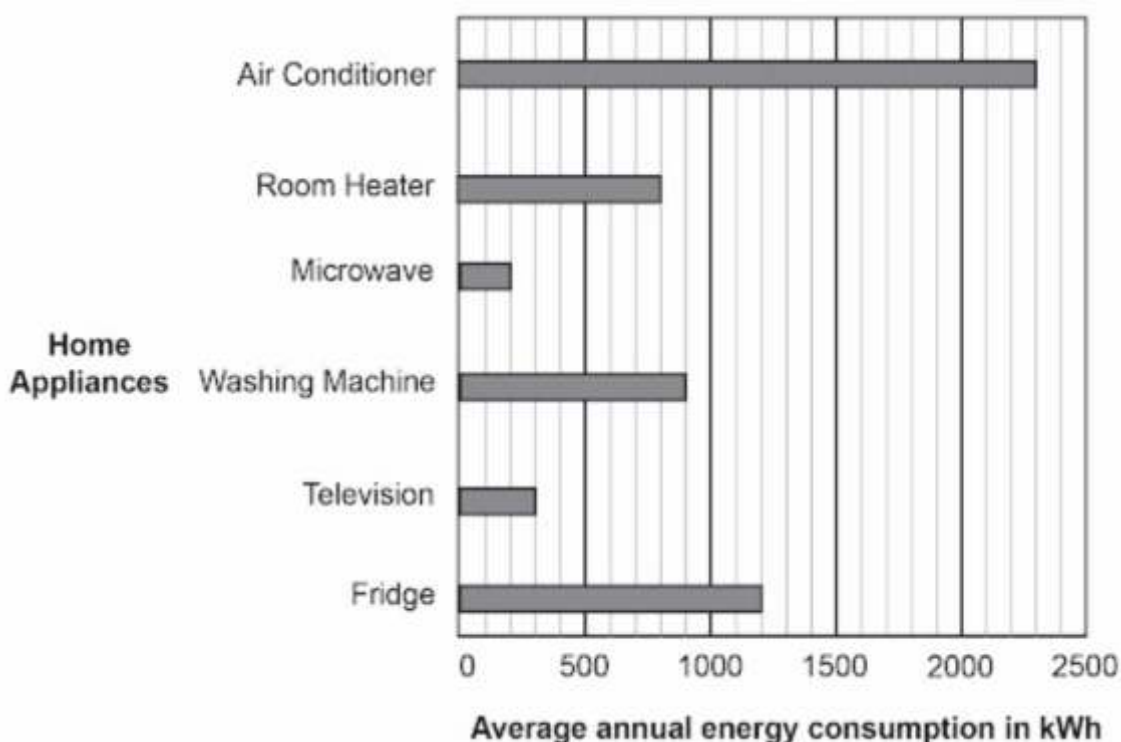
Curriculum Aligned Competency Based Test Items

Mathematics

Class 6 – Chapter 9

Data Handling

Home appliances like fridge and television consume electrical energy. Jiya made a bar graph of the electricity consumption of six appliances in her house in a year.



SAS21M06D0901

1 Which appliance consumes more than 2000 kWh?

- A. Fridge
- B. Television
- C. Microwave
- D. Air Conditioner

SAS21M06D0902

2 What is the electricity consumption (in kWh) of the washing machine?

- A. 500
- B. 800
- C. 900
- D. 1000

Jiya represents the energy consumption of a microwave and a television as given below.

Microwave – ● ●

Television – ● ● ●

SAS21S090204

3 How much energy consumption (in kWh) does a ● represent?

- A. 1
- B. 100
- C. 500
- D. 2500

SAS21M06D0904

4 Using Jiya's method, which of the following shows the room heater's electricity consumption?














- A. ● ● ● ● ● ● ●
- B. ● ● ● ● ● ● ● ●
- C. ● ● ● ● ● ● ● ● ●
- D. ● ● ● ● ● ● ● ● ● ●

SAS21M06D0905

5 How much more electricity (in kWh) was used by the fridge than by the television?

- A. 300 kWh
- B. 700 kWh
- C. 900 kWh
- D. 1200 kWh

Shobhit works for a shoe store. He records the shoe sizes and the number of pairs sold every day. On Tuesday, he sold 60 pairs. His record for the day is shown below.

Shoe size	Number of pairs sold
4	 
5	 
6	  
7	  
8	  

Note:  represents 5.

SAS21M06D0906

6 How many pairs of size 8 were sold on Tuesday?

- A. 3
- B. 10
- C. 11
- D. 13

SAS21M06D0907

7 Which shoe size sold the most?

- A. Size 4
- B. Size 7
- C. Size 8
- D. Size 9

SAS21M06D0908

8 Shobhit realised that he had not fully recorded the sale for Tuesday. How many sold pairs had he not recorded?

SAS21M06D0909

- 9 The unrecorded data was of shoe size 7. Shobit corrected his record accordingly. Which of the following statements will be true now?
- A. Shoe size 8 sold the least now
 - B. Shoe size 7 sold the most now
 - C. Shoe size 5 is the new mode of the data
 - D. Number of shoe pairs of size 3 can be calculated

SAS21M06D0910

- 10 The price of one shoe pair of size 5 is Rs 800.
How much money had Shobhit collected by selling all the shoe pairs of size 5?

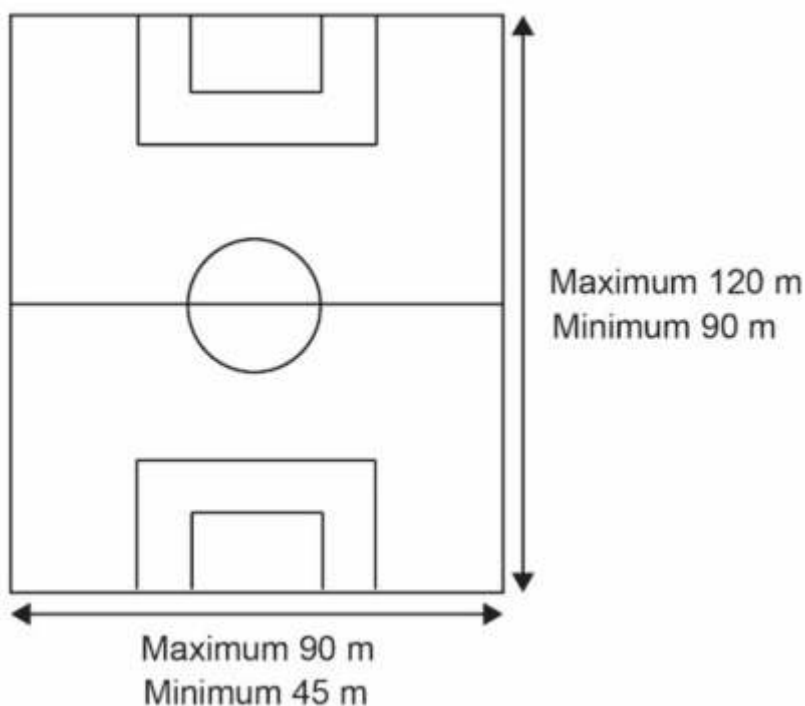
Curriculum Aligned Competency Based Test Items

Mathematics

Class 6 – Chapter 10

Mensuration

International Federation of Association Football (FIFA) is responsible for the organization and promotion of association football's major international tournaments. FIFA issues guidelines for the dimensions of football fields. The figure below shows the maximum and minimum lengths and widths of a football field.



SAS21M06S1001

1 What is the maximum area (in m^2) of the football field?

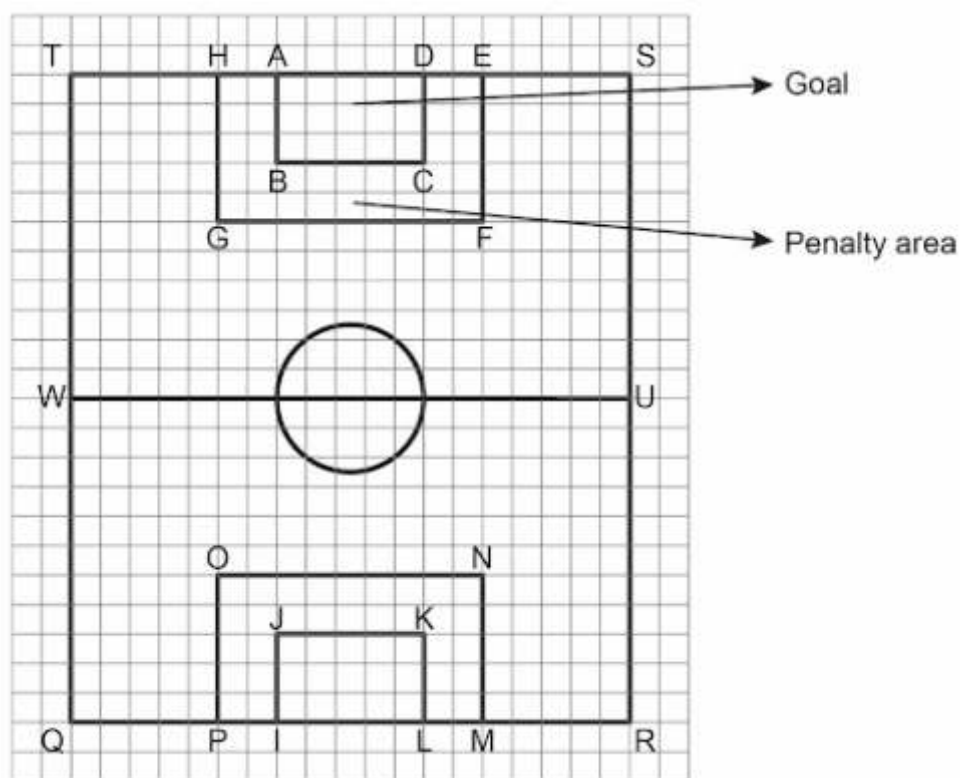
- A. 30
- B. 420
- C. 1080
- D. 10,800

SAS21M06S1002

2 What can be the minimum perimeter (in m) of the football field?

- A. 90
- B. 135
- C. 270
- D. 4050

The figure below shows the football field for a school tournament.



SAS21M06S1003

3 What is the perimeter (in m) of WURQ?

- A. 60
- B. 240
- C. 960
- D. 3344

SAS21M06S1004

- 4 “The area enclosed by QRUW is equal to the area enclosed by WUST.”
Is the statement true? Give reason.

SAS21M06S1005

- 5 What is the area (in m^2) of the penalty area?

- A. 30
- B. 272
- C. 480
- D. 720

SAS21M06S1006

- 6 Is the perimeter of the penalty area of the football field double the perimeter of the goal area? Give reason.

SAS21M06S1007

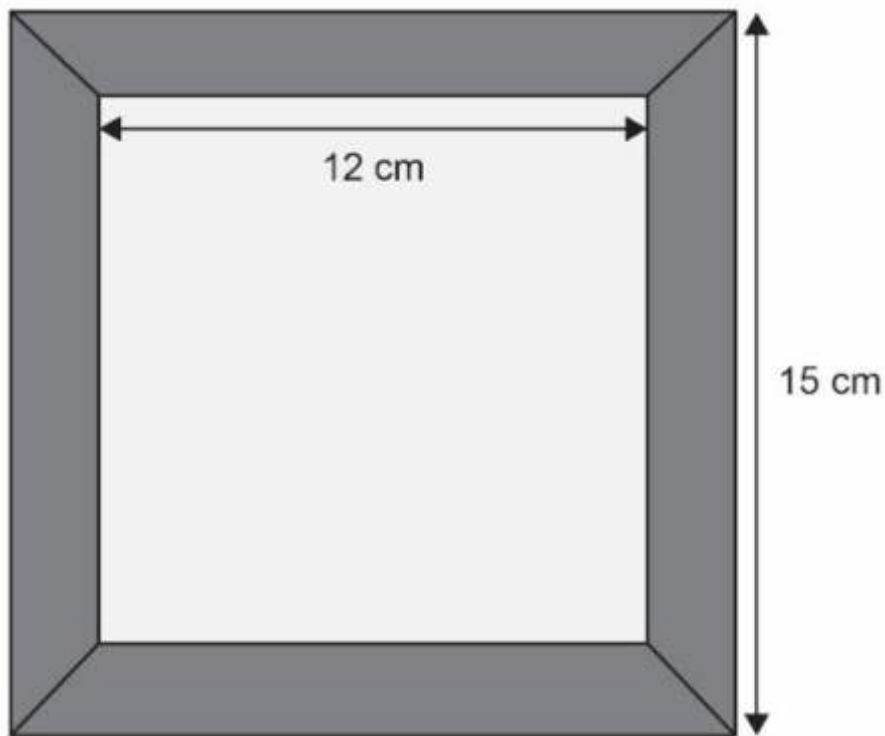
- 7 Does the school football field meet the FIFA standards? Give reason.

SAS21M06S1008

- 8 Find the perimeter of the shape WURMNOPQW.

- A. 6.16 m
- B. 8.8 m
- C. 17.6 m
- D. 12.32 m

The figure below shows a square wooden frame enclosing a square picture.



SAS21M06S1009

9 What is the area (in cm^2) of the frame?

- A. 81
- B. 144
- C. 181
- D. 225

SAS21M06S1010

10 What is the perimeter (in cm) of the picture?

- A. 12
- B. 48
- C. 60
- D. 144

Curriculum Aligned Competency Based Test Items

Mathematics

Class 6 – Chapter 11

Algebra

Sarah buys books from a dealer for her bookstall.
She buys 20 comic books, 15 storybooks and 10 colouring books. A comic book costs Rs a . A storybook costs Rs 5 more than a comic book and a colouring book costs Rs 10 more than a storybook.

SAS21M06C1101

1 Which of the following expression shows the total cost of the comic books?

- A. 20
- B. $20a$
- C. $20 + a$
- D. $20 - a$

SAS21M06C1102

2 Sarah gets a profit of Rs 2 on the sale of each comic book. Which of the following expression shows the amount Sarah earns by selling 10 comic books?

- A. $a+2$
- B. $20a-20$
- C. $20a+40$
- D. $20+a+2$

SAS21M06C1103

3 Write an expression to show the total cost of 15 storybooks.

SAS21M06C1104

4 A colouring book costs Rs 50. What is the cost of the comic book?

- A. 20
- B. 40
- C. 45
- D. 50

SAS21M06C1105

5 Garima puts a handful of seeds into an empty bird feeder. A bird comes and eats 7 of them. Which of the following expressions can represent this situation algebraically?

- A. $p + 7$
- B. $7p$
- C. $p - 7$
- D. $p \div 7$

SAS21M06C1106

6 Garima put some more seeds in the feeder. Which of the following expressions can represent this situation algebraically?

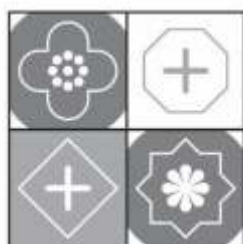
- A. $2p$
- B. $p + 7$
- C. $p + q$
- D. $p + q - 7$

SAS21M06C1107

7 Which of the following equations shows the commutative property of addition?

- A. $14 + 6 = 20$
- B. $14 - 6 = 8$
- C. $14 + 6 = 6 + 14$
- D. $14 \times 6 = 6 \times 14$

Sudhir observed the pattern shown below on a cloth. The pattern consists of 4 patches.



The pattern is repeated n number of times in a 4 meter long cloth.

SAS21M06C1108

8 Which of the following expressions shows the number of octagon patches on the cloth?

- A. n
- B. $4n$
- C. $n + 4$
- D. $n \div 4$

SAS21M06C1109

9 Write an expression to represent an expressions which shows the total number of patches on the cloth?

SAS21M06C1110

10 The cloth is cut into two equal halves. Sudhir observed both cloth parts have an equal number of repeating blocks but the last line is not complete. Which of the following expression shows the number of complete repeating blocks?

- A. $n - 1$
- B. $2n - 1$
- C. $\frac{n}{2}$
- D. $\frac{n}{2} - 1$

Curriculum Aligned Competency Based Test Items

Mathematics

Class 6 – Chapter 12

Ratio and Proportion

Sam organised a party. He decorated his house and arranged food for guests.
He spent Rs 1600 on decoration and Rs 8000 on food.

SAS21M06C1201

1 What is the ratio of the money that Sam spent on decoration to food?

- A. 1:4
- B. 1:5
- C. 1:6
- D. 5:1

SAS21M06C1202

2 Sam used paper ribbons to decorate the walls. He made a pattern using groups of four ribbons. Each group had one blue ribbon and the remaining are yellow. What is the ratio of blue ribbons to the total number of ribbons in each pattern?

SAS21M06C1203

3 To decorate one wall, Sam used 18 blue ribbons. How many yellow ribbons were used on that wall?

- A. 3
- B. 6
- C. 36
- D. 54

Sam purchased 40 blue ribbons.



Plastic Curly Ribbon Multicolour
(Pack of 5 Rolls)
Size: (25mm × 20 yards)

Rs. **25.00**
Inclusive of all taxes

He orders the ribbons shown above.

SAS21M06C1204

- 4 How many rupees will Sam pay for the 40 ribbons?

SAS21M06C1205

- 5 Sam ordered 21 sausages. Of the 15 guests that came to the party, 6 guests had two sausages each, three guests had one sausage each and the remaining guests did not have any sausages. What is the ratio of the number of sausages left to the number of sausages had by the guests?

- A. 2:5
- B. 2:7
- C. 5:2
- D. 5:7

SAS21M06C1206

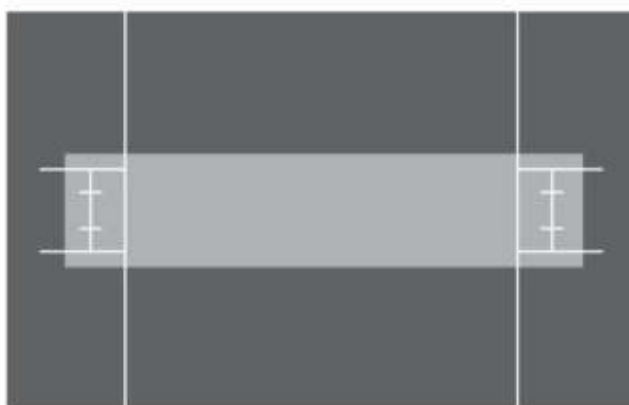
- 6 One pack of 3 sausages costs Rs 120. What is the cost of 21 sausages?

- A. Rs 40
- B. Rs 630
- C. Rs 840
- D. Rs 2520

SAS21M06C1207

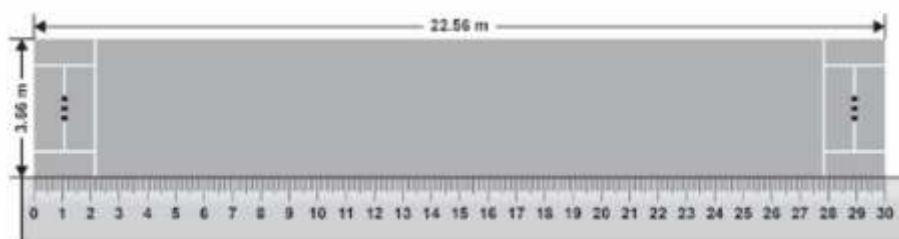
7 Whose response is not correct? Give a reason for your response.

Rajat takes a photograph of the top view of a cricket pitch with a drone



He then makes a scale drawing of the pitch and marks the lengths of the outer boundaries of the pitch.

Rajat's scale diagram is shown below.



He places a ruler along one length of the diagram as shown above.

SAS21M06C1208

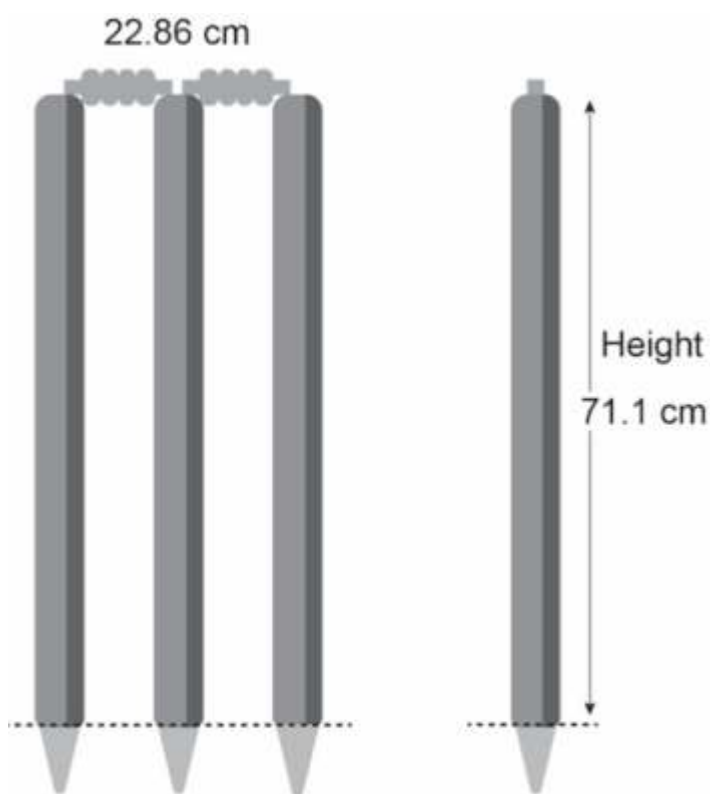
8 What is the ratio of the length of the pitch drawn by Rajat to the actual length of the pitch?

- A. 1 : 0.0752
- B. 1 : 0.752
- C. 1 : 75.2
- D. 1 : 7520

SAS21M06C1209

- 9 Aarav also draws a model of the same cricket pitch. Aarav's model is 10 cm wide and 30 cm long. Are the dimensions of Aarav's model proportional to the actual pitch dimensions? Give a reason to justify your answer

Here are the dimensions of some stumps used in cricket.



Rajat wants draw a scale model of this stump. For the diagram, Rajat uses the ratio 1:9 to the actual size.

SAS21M06C1210

- 10 What is the height (in cm) of the stumps drawn by Rajat?

- A. 7.1
- B. 7.9
- C. 79
- D. 711

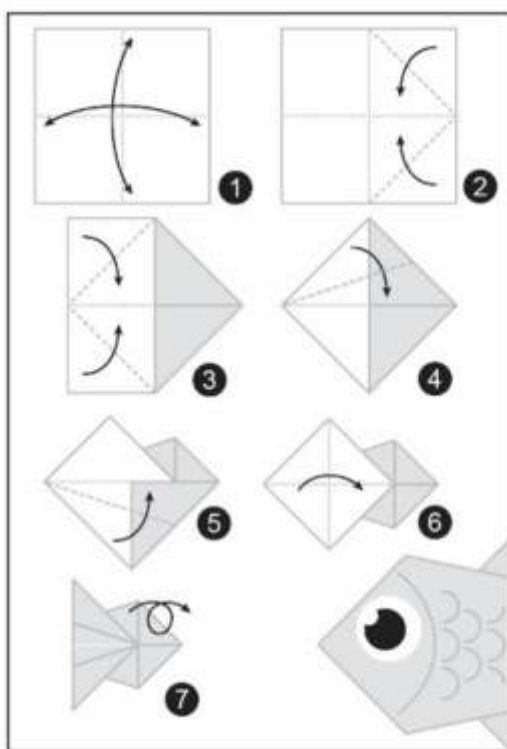
Curriculum Aligned Competency Based Test Items

Mathematics

Class 6 – Chapter 13

Symmetry

Udit made a paper fish by folding a paper. He uses a square paper, with a coloured side and a white side. He followed the steps shown below to make the fish.



SAS21M06S1301

1 How many lines of symmetry can be drawn on a square paper?

SAS21M06S1302

2 To perform step 4, which geometrical construction was done?

- A. Dividing a line segment into two equal parts.
- B. Making a perpendicular to a line segment.
- C. Dividing an angle into two equal parts.
- D. Joining two lines of equal length.

SAS21M06S1303

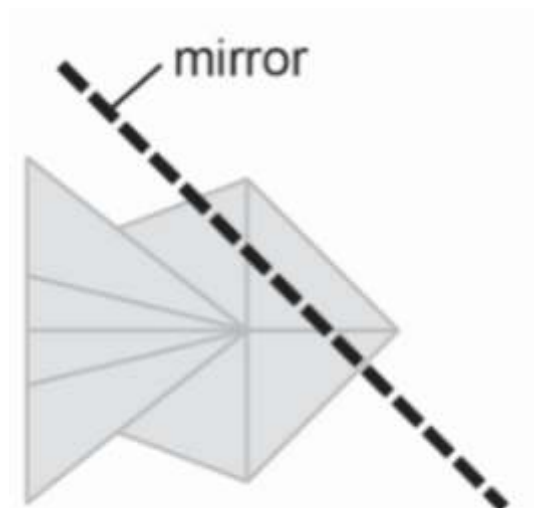
3 Udit folded the paper in step 2 and step 3, why were the two halves after step 3 of different colours?

SAS21M06S1304

4 Shape 1 has four lines of symmetry. How many lines of symmetry will the shape have after Udit completes step 2?

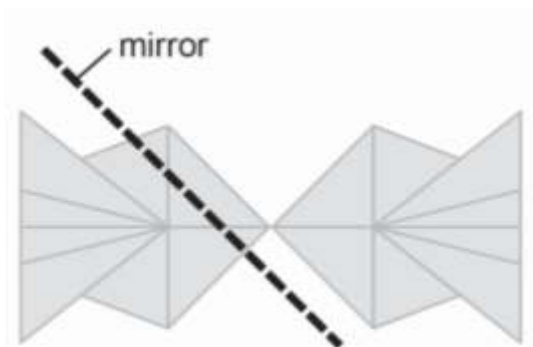
- A. 0
- B. 1
- C. 2
- D. 4

Udit placed a mirror partly covering the fish as under.

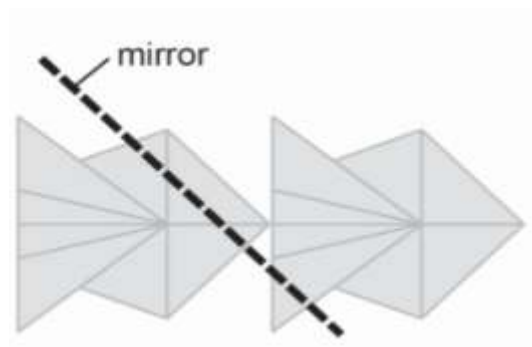


5 What should be the image visible in the mirror?

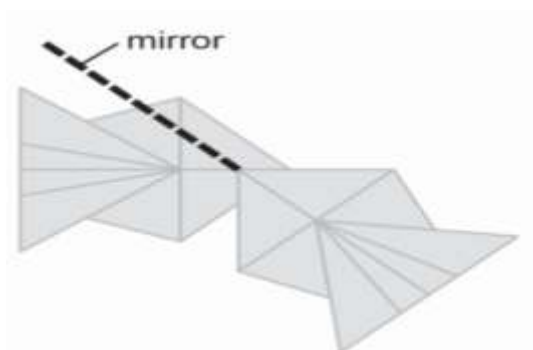
A.



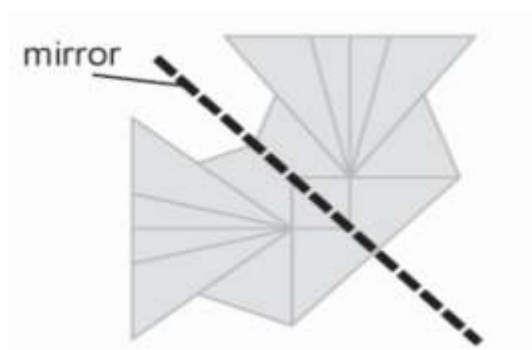
B.



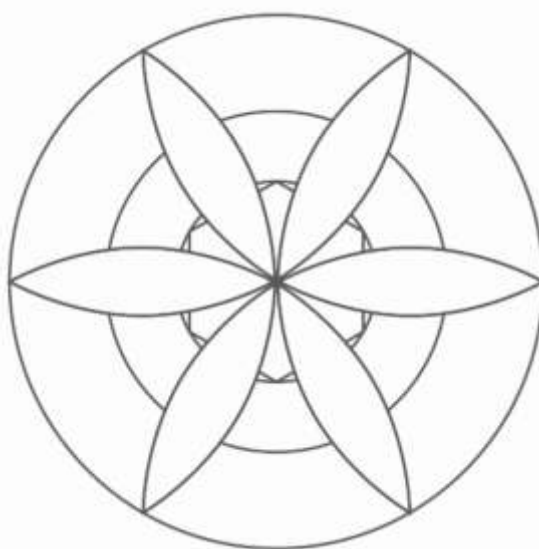
C.



D.



Mani draws this design on a sheet of paper.



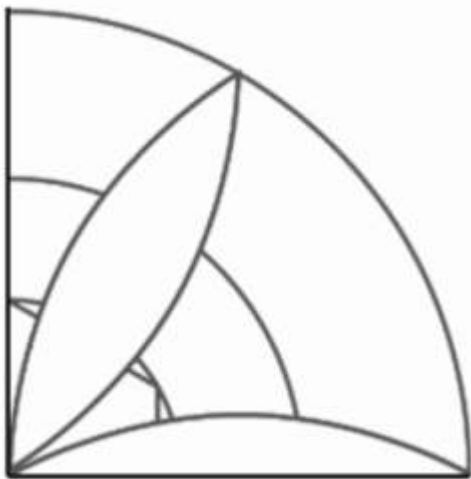
SAS21M06S1306

- 6 How many lines of symmetry are there in the design?

SAS21M06S1307

- 7 Gautam modified Mani's design by erasing all the hexagons from Mani's design. How many lines of symmetry are there in Gautam's design?

This is a part of the design created by Mani.



SAS21M06S1308

- 8 Can you create the complete design by repeating this part? How?

Mani says, “You can have a shape smaller than the one below to make the design.”



SAS21M06S1309

9 Do you agree? Justify your response.

SAS21M06S1310

10 How many lines of symmetry are in a circle?

- A. Zero
- B. Two
- C. Six
- D. Infinite

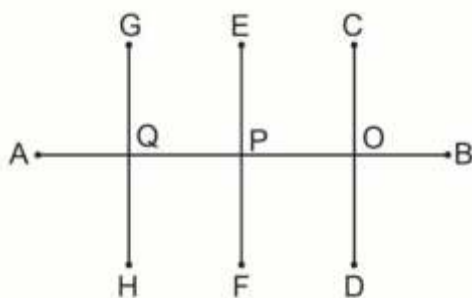
Curriculum Aligned Competency Based Test Items

Mathematics

Class 6 – Chapter 14

Practical Geometry

Sunita draws a line segment AB of length 16 cm. She then draws three line segments of equal length, which cross AB as shown in the figure below.



Points O, P, Q are the mid-point of line segments CD, EF and GH respectively.

SAS21M06S1401

1 The length of line segment CD is 10 cm. What is the length of QH?

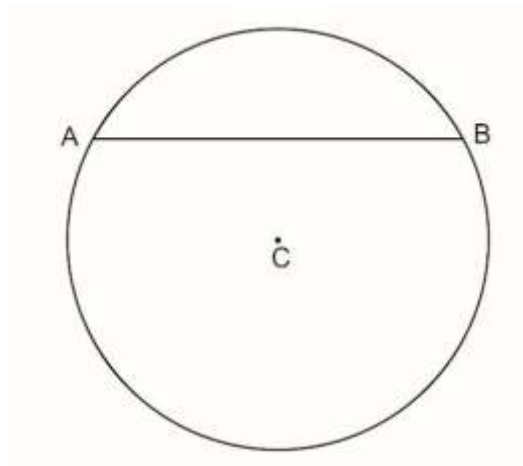
- A. 5 cm
- B. 10 cm
- C. 15 cm
- D. 16 cm

SAS21M06S1402

2 Line segments EF and GH are parallel to CD. The measure of $\angle COB = 90^\circ$. Which of the following is true for line segments EF and GH?

- A. EF and GH are parallel to AB
- B. EF and GH are perpendicular to AB
- C. The length of EF is half of the length of GH
- D. The sum of the length of EF and GH is equal to the length of AB

Jasleen draws a circle of radius 3.8 cm with centre C.



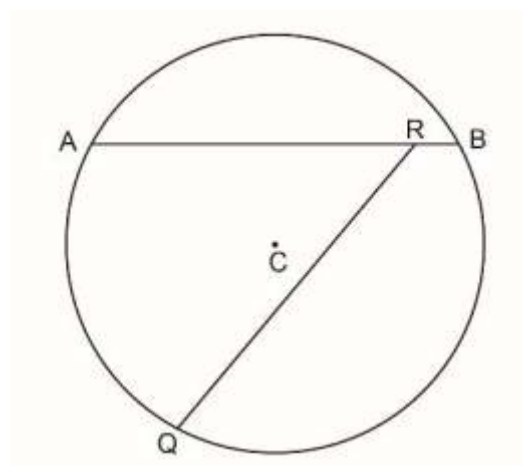
She wants to draw a perpendicular bisector to the chord AB.

SAS21M06S1403

3 Which of the following **cannot be** true for the perpendicular bisector of the chord?

- A. It passes through C
- B. It divides AB into two equal parts
- C. It makes a right angle with base AB
- D. Its length is greater than 7.6 cm

Jasleen adds a line segment RQ to the circle.

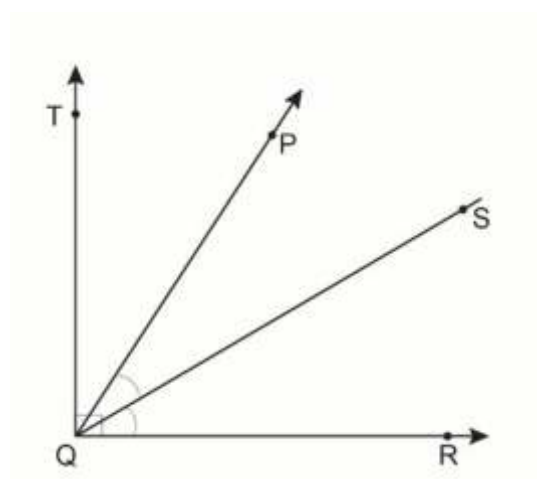


The length of RQ is equal to the length of AB.

SAS21M06S1404

- 4 Is RQ a chord of the circle? Give a reason to justify your answer.

Angad says, "QT is the line of symmetry for $\angle PQR$."
Bhupesh says, "QS is the line of symmetry for $\angle PQR$."



SAS21M06S1405

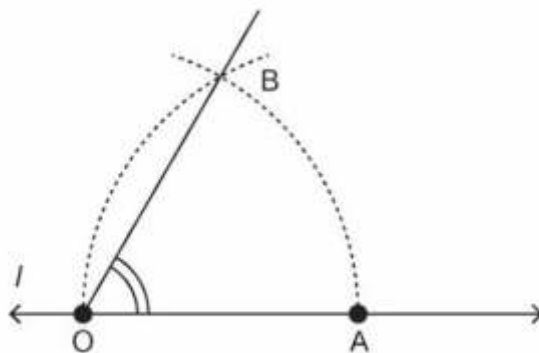
- 5 Who is correct? Give a reason to justify your answer.

SAS21M06S1406

- 6 What is the measure of $\angle PQT$?

- A. 20°
- B. 30°
- C. 60°
- D. 90°

Jeenal draws an angle.



SAS21M06S1407

7 What is the measure of $\angle BOA$?

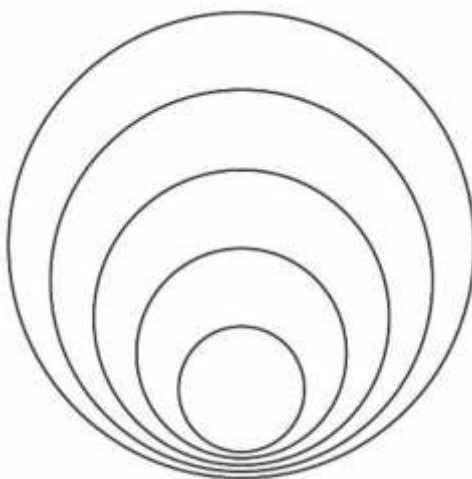
- A. 30°
- B. 45°
- C. 60°
- D. 90°

SAS21M06S1408

8 Two circles C_1 and C_2 are drawn from the same centre. The diameter of C_1 is 6 cm, which is one-third of the diameter of C_2 . What is the length of the radius of C_2 ?

- A. 2 cm
- B. 3 cm
- C. 9 cm
- D. 18 cm

Jaspreet draws 5 circles as shown in the figure below.



SAS21M06S1409

- 9** Jaspreet claims, “These five circles are concentric as they have a common point.” Do you agree? Give a reason to justify your answer.

SAS21M06S1410

- 10** Ruby draws a line segment AB of length 12.6 cm. She further divides the line segment into equal parts such that each part is 4.2 cm long. In how many parts did Ruby divide the line segment?

Item Number	Question 1
Question Code	SAS21M06Q0101
Grade & Chapter Name	Grade 6 Knowing Our Numbers
Concept Sub-concept	Numbers Large Numbers in Practice
Competency	Employ
Item Type	Multiple Choice Question
Full Credit (Full Score)	C. 134 m
No Credit (No Score)	Any other response or missing response

Item Number	Question 2
Question Code	SAS21M06Q0102
Grade & Chapter Name	Grade 6 Knowing Our Numbers
Concept Sub-concept	Numbers Large Numbers in Practice
Competency	Employ
Item Type	Multiple Choice Question
Full Credit (Full Score)	B. 170
No Credit (No Score)	Any other response or missing response

Item Number	Question 3
Question Code	SAS21M06Q0103
Grade & Chapter Name	Grade 6 Knowing Our Numbers
Concept Sub-concept	Numbers Large Numbers in Practice
Competency	Employ
Item Type	Closed Constructed Response
Full Credit (Full Score)	360 360 km
No Credit (No Score)	Any other response or missing response

Item Number	Question 4
Question Code	SAS21M06Q0104
Grade & Chapter Name	Grade 6 Knowing Our Numbers
Concept Sub-concept	Numbers Large Numbers in Practice
Competency	Interpret & Evaluate
Item Type	Closed Constructed Response
Full Credit (Full Score)	₹ 7,400,000 7,400,000
No Credit (No Score)	Any other response or missing response

Item Number	Question 5
Question Code	SAS21M06Q0105
Grade & Chapter Name	Grade 6 Knowing Our Numbers
Concept Sub-concept	Numbers Large Numbers in Practice
Competency	Interpret & Evaluate
Item Type	Closed Constructed Response
Full Credit (Full Score)	Zone 3
No Credit (No Score)	Any other response or missing response

Item Number	Question 6
Question Code	SAS21M06Q0106
Grade & Chapter Name	Grade 6 Knowing Our Numbers
Concept Sub-concept	Numbers Place Value (Shifting Digits)
Competency	Formulate
Item Type	Closed Constructed Response
Full Credit (Full Score)	6
No Credit (No Score)	Any other response or missing response

Item Number	Question 7
Question Code	SAS21M06Q0107
Grade & Chapter Name	Grade 6 Knowing Our Numbers
Concept Sub-concept	Numbers Place Value (Shifting Digits)
Competency	Employ
Item Type	Multiple Choice Question
Full Credit (Full Score)	B. Before 0
No Credit (No Score)	Any other response or missing response

Item Number	Question 8
Question Code	SAS21M06Q0108
Grade & Chapter Name	Grade 6 Knowing Our Numbers
Concept Sub-concept	Numbers Large Numbers in Practice
Competency	Employ
Item Type	Closed Constructed Response
Full Credit (Full Score)	Writes 500 or ₹ 500 along with calculation Calculation as: Total cost for less than 5 Km = ₹ 2,00,000 No of students travelling less than 5 Km = 400 Monthly fee for one student = $200000/400 = ₹ 500$
Partial Credit (Partial Score)	Writes the value without showing the calculation 500 or ₹ 500
No Credit (No Score)	Any other response or missing response

Item Number	Question 9
Question Code	SAS21M06Q0109
Grade & Chapter Name	Grade 6 Knowing Our Numbers
Concept Sub-concept	Numbers Large Numbers in Practice
Competency	Interpret & Evaluate
Item Type	Closed Constructed Response
Full Credit (Full Score)	Finds prime factors of 105 which results in the required range <ul style="list-style-type: none"> • 3 sections with 35 students in each section • 5 sections with 21 students in each section
No Credit (No Score)	Any other response or missing response

Item Number	Question 10
Question Code	SAS21M06Q0110
Grade & Chapter Name	Grade 6 Knowing Our Numbers
Concept Sub-concept	Numbers Large Numbers in Practice
Competency	Employ
Item Type	Closed Constructed Response
Full Credit (Full Score)	18 or 18 water coolers 7,20,000 or ₹ 7,20,000
No Credit (No Score)	Any other response or missing response

Item Number	Question 1
Question Code	SAS21M06Q0201
Grade & Chapter Name	Grade 6 Whole Numbers
Concept Sub-concept	Numbers Patterns in the Whole Numbers
Competency	Employ
Item Type	Closed Constructed Response
Full Credit (Full Score)	Writes 'No' with valid justification <ul style="list-style-type: none"> No, Amisha did not pay the correct amount. Actual amount to be paid was ₹ 1805.
No Credit (No Score)	Any other response or missing response

Item Number	Question 2
Question Code	SAS21M06Q0202
Grade & Chapter Name	Grade 6 Whole Numbers
Concept Sub-concept	Numbers Patterns in the Whole Numbers
Competency	Employ
Item Type	Closed Constructed Response
Full Credit (Full Score)	70 ₹ 70
No Credit (No Score)	Any other response or missing response

Item Number	Question 3
Question Code	SAS21M06Q0203
Grade & Chapter Name	Grade 6 Whole Numbers
Concept Sub-concept	Numbers Additive and Multiplicative Identity
Competency	Interpret & Evaluate
Item Type	Closed Constructed Response
Full Credit (Full Score)	Associative property of addition or associative property or associativity
No Credit (No Score)	Any other response or missing response

Item Number	Question 4
Question Code	SAS21M06Q0204
Grade & Chapter Name	Grade 6 Whole Numbers
Concept Sub-concept	Numbers Additive and Multiplicative Identity
Competency	Interpret & Evaluate
Item Type	Closed Constructed Response
Full Credit (Full Score)	Writes 'Yes' with valid justification or examples <ul style="list-style-type: none"> • Yes, because the cost of 3 kg of sugar should be ₹ 165. • Yes, 220 divided by 3 is more than 55.
No Credit (No Score)	Any other response or missing response

Item Number	Question 5
Question Code	SAS21M06Q0205
Grade & Chapter Name	Grade 6 Whole Numbers
Concept Sub-concept	Numbers Patterns in the Whole Numbers
Competency	Employ
Item Type	Closed Constructed Response
Full Credit (Full Score)	150 ₹ 150
No Credit (No Score)	Any other response or missing response

Item Number	Question 6
Question Code	SAS21M06Q0206
Grade & Chapter Name	Grade 6 Whole Numbers
Concept Sub-concept	Numbers Patterns in the Whole Numbers
Competency	Employ
Item Type	Multiple Choice Question
Full Credit (Full Score)	C. $(14 + 13) \times 5$
No Credit (No Score)	Any other response or missing response

Item Number	Question 7
Question Code	SAS21M06Q0207
Grade & Chapter Name	Grade 6 Whole Numbers
Concept Sub-concept	Numbers Patterns in the Whole Numbers
Competency	Formulate
Item Type	Open Constructed Response
Full Credit (Full Score)	<p>Mentions any two seat numbers which are at the same position from left and right end with or without the letter J</p> <p>For example: J1 and J13 or 1 and 13 should be considered equivalent. Possible answers could be:</p> <ul style="list-style-type: none"> • 1 and 13 or 1-13 • 2 and 12 or 2-12 • 3 and 11 or 3-11 • 4 and 10 or 4-10 • 5 and 9 or 5-9 • 6 and 8 or 6-8
No Credit (No Score)	Any other response or missing response

Item Number	Question 8
Question Code	SAS21M06Q0208
Grade & Chapter Name	Grade 6 Whole Numbers
Concept Sub-concept	Numbers Patterns in the Whole Numbers
Competency	Employ
Item Type	Multiple Choice Question
Full Credit (Full Score)	D. $[(200 \times 32) + (250 \times 31) + (350 \times 35) + (450 \times 24)]$
No Credit (No Score)	Any other response or missing response

Item Number	Question 9
Question Code	SAS21M06Q0209
Grade & Chapter Name	Grade 6 Whole Numbers
Concept Sub-concept	Numbers Additive and Multiplicative Identity
Competency	Interpret & Evaluate
Item Type	Open Constructed Response
Full Credit (Full Score)	<p>Writes any combination which gives a sum of 580 for the items on the men</p> <ul style="list-style-type: none"> • 1 Popcorn + 1 Cold drink + 1 Burger + 1 Water bottle • 2 Nachos + 1 Cold drink • 2 Burgers + 1 Nachos + 1 Water bottle
No Credit (No Score)	Any other response or missing response

Item Number	Question 10
Question Code	SAS21M06Q0210
Grade & Chapter Name	Grade 6 Whole Numbers
Concept Sub-concept	Numbers Additive and Multiplicative Identity
Competency	Formulate
Item Type	Multiple Choice Question
Full Credit (Full Score)	A. $3 \times (8 + 2)$
No Credit (No Score)	Any other response or missing response

Item Number	Question 1
Question Code	SAS21M06N0301
Grade & Chapter Name	Grade 6 Playing with Numbers
Concept Sub-concept	Numbers Factors and Multiples
Competency	Employ
Item Type	Closed Constructed Response
Full Credit (Full Score)	7 rows and 5 students/teacher per row 7 students/teacher per row and 5 rows
No Credit (No Score)	Any other response or missing response

Item Number	Question 2
Question Code	SAS21M06N0302
Grade & Chapter Name	Grade 6 Playing with Numbers
Concept Sub-concept	Numbers Factors and Multiples
Competency	Employ
Item Type	Multiple Choice Question
Full Credit (Full Score)	C. 48
No Credit (No Score)	Any other response or missing response

Item Number	Question 3
Question Code	SAS21M06N0303
Grade & Chapter Name	Grade 6 Playing with Numbers
Concept Sub-concept	Numbers Factors and Multiples
Competency	Formulate
Item Type	Multiple Choice Question
Full Credit (Full Score)	B. 4 rows with 8 students/teachers in each
No Credit (No Score)	Any other response or missing response

Item Number	Question 4
Question Code	SAS21M06N0304
Grade & Chapter Name	Grade 6 Playing with Numbers
Concept Sub-concept	Numbers Factors and Multiples
Competency	Employ
Item Type	Multiple Choice Question
Full Credit (Full Score)	B. 25
No Credit (No Score)	Any other response or missing response

Item Number	Question 5
Question Code	SAS21M06N0305
Grade & Chapter Name	Grade 6 Playing with Numbers
Concept Sub-concept	Numbers Factors and Multiples
Competency	Formulate
Item Type	Multiple Choice Question
Full Credit (Full Score)	D. 12
No Credit (No Score)	Any other response or missing response

Item Number	Question 6
Question Code	SAS21M06N0306
Grade & Chapter Name	Grade 6 Playing with Numbers
Concept Sub-concept	Numbers Factors and Multiples
Competency	Formulate
Item Type	Closed Constructed Response
Full Credit (Full Score)	Accept any or combination of (13, 14); (14, 15) and (13, 15). <ul style="list-style-type: none"> • (13, 14) • (13, 14) and (14, 15) • (13, 14), (14, 15) and (13, 15)
No Credit (No Score)	Any other response or missing response

Item Number	Question 7
Question Code	SAS21M06N0307
Grade & Chapter Name	Grade 6 Playing with Numbers
Concept Sub-concept	Numbers Factors and Multiples
Competency	Interpret & Evaluate
Item Type	Closed Constructed Response
Full Credit (Full Score)	4 4 students
No Credit (No Score)	Any other response or missing response

Item Number	Question 8
Question Code	SAS21M06N0308
Grade & Chapter Name	Grade 6 Playing with Numbers
Concept Sub-concept	Numbers Factors and Multiples
Competency	Interpret & Evaluate
Item Type	Closed Constructed Response
Full Credit (Full Score)	4 4 times
No Credit (No Score)	Any other response or missing response

Item Number	Question 9
Question Code	SAS21M06N0309
Grade & Chapter Name	Grade 6 Playing with Numbers
Concept Sub-concept	Numbers Factors and Multiples
Competency	Employ
Item Type	Multiple Choice Question
Full Credit (Full Score)	C. 120
No Credit (No Score)	Any other response or missing response

Item Number	Question 10
Question Code	SAS21M06N0310
Grade & Chapter Name	Grade 6 Playing with Numbers
Concept Sub-concept	Numbers Factors and Multiples
Competency	Interpret & Evaluate
Item Type	Closed Constructed Response
Full Credit (Full Score)	Accept multiples of 6 for vanilla muffins and multiples of 5 for chocolate muffins. <ul style="list-style-type: none"> • 6 vanilla and 5 chocolate • 12 vanilla and 10 chocolate • 24 vanilla and 20 chocolate
No Credit (No Score)	Any other response or missing response

Item Number	Question 1
Question Code	SAS21M06S0401
Grade & Chapter Name	Grade 6 Basic Geometrical Ideas
Concept Sub-concept	Geometry Shapes and Curves (Open and Close Curve)
Competency	Formulate
Item Type	Multiple Choice Question
Full Credit (Full Score)	B. Graphic
No Credit (No Score)	Any other response or missing response

Item Number	Question 2
Question Code	SAS21M06S0402
Grade & Chapter Name	Grade 6 Basic Geometrical Ideas
Concept Sub-concept	Geometry Shapes and Curves (Open and Close Curve)
Competency	Employ
Item Type	Closed Constructed Response
Full Credit (Full Score)	Many lines Infinite lines
No Credit (No Score)	Any other response or missing response

Item Number	Question 3
Question Code	SAS21M06S0403
Grade & Chapter Name	Grade 6 Basic Geometrical Ideas
Concept Sub-concept	Geometry Shapes and Curves (Open and Close Curve)
Competency	Formulate
Item Type	Multiple Choice Question
Full Credit (Full Score)	B. Graphic
No Credit (No Score)	Any other response or missing response

Item Number	Question 4
Question Code	SAS21M06S0404
Grade & Chapter Name	Grade 6 Basic Geometrical Ideas
Concept Sub-concept	Geometry Shapes and Curves (Polygons)
Competency	Interpret & Evaluate
Item Type	Closed Constructed Response
Full Credit (Full Score)	Accept answers including definition of polygons. <ul style="list-style-type: none"> All the lines of a polygon must be straight. The figure has one curve and two straight lines.
No Credit (No Score)	Any other response or missing response

Item Number	Question 5
Question Code	SAS21M06S0405
Grade & Chapter Name	Grade 6 Basic Geometrical Ideas
Concept Sub-concept	Geometry Shapes and Curves (Open and Close Curve)
Competency	Formulate
Item Type	Multiple Choice Question
Full Credit (Full Score)	D. A line segment
No Credit (No Score)	Any other response or missing response

Item Number	Question 6
Question Code	SAS21M06S0406
Grade & Chapter Name	Grade 6 Basic Geometrical Ideas
Concept Sub-concept	Geometry Shapes and Curves (Open and Close Curve)
Competency	Formulate
Item Type	Closed Constructed Response
Full Credit (Full Score)	Accept all the equivalents of section, either in the blank or in answer space. <ul style="list-style-type: none"> • part • section • segment
No Credit (No Score)	Any other response or missing response

Item Number	Question 7
Question Code	SAS21M06S0407
Grade & Chapter Name	Grade 6 Basic Geometrical Ideas
Concept Sub-concept	Geometry Shapes and Curves (Polygons)
Competency	Employ
Item Type	Multiple Choice Question
Full Credit (Full Score)	B. They have start points
No Credit (No Score)	Any other response or missing response

Item Number	Question 8
Question Code	SAS21M06S0408
Grade & Chapter Name	Grade 6 Basic Geometrical Ideas
Concept Sub-concept	Geometry Shapes (Triangles)
Competency	Interpret & Evaluate
Item Type	Closed Constructed Response
Full Credit (Full Score)	Yes, with valid reasoning. <ul style="list-style-type: none"> Yes, Mahesh is correct as triangle ABD and BCD have the common side AD.
No Credit (No Score)	Any other response or missing response

Item Number	Question 9
Question Code	SAS21M06S0409
Grade & Chapter Name	Grade 6 Basic Geometrical Ideas
Concept Sub-concept	Geometry Shapes (Triangles)
Competency	Employ
Item Type	Multiple Choice Question
Full Credit (Full Score)	D. Interior of triangle BDC
No Credit (No Score)	Any other response or missing response

Item Number	Question 10
Question Code	SAS21M06S0410
Grade & Chapter Name	Grade 6 Basic Geometrical Ideas
Concept Sub-concept	Geometry Shapes (Quadrilaterals)
Competency	Employ
Item Type	Multiple Choice Question
Full Credit (Full Score)	C. Side JL is opposite to side MK
No Credit (No Score)	Any other response or missing response

Item Number	Question 1
Question Code	SAS21M06S0501
Grade & Chapter Name	Grade 6 Understanding Elementary Shapes
Concept Sub-concept	Geometry/Shapes Classification of Triangles
Competency	Formulate
Item Type	Multiple Choice Question
Full Credit (Full Score)	B. Isosceles
No Credit (No Score)	Any other response or missing response

Item Number	Question 2
Question Code	SAS21M06S0502
Grade & Chapter Name	Grade 6 Understanding Elementary Shapes
Concept Sub-concept	Geometry/Shapes Classification of Triangles
Competency	Employ
Item Type	Closed Constructed Response
Full Credit (Full Score)	Yes, triangle DGF is a right-angled triangle as angle DGF = 90° . Yes, triangle DGF is a right-angled triangle as angle $\angle G = 90^\circ$. Yes, triangle DGF is a right-angled triangle as GF is perpendicular to GD.
No Credit (No Score)	Any other response or missing response

Item Number	Question 3
Question Code	SAS21M06S0503
Grade & Chapter Name	Grade 6 Understanding Elementary Shapes
Concept Sub-concept	Geometry/Shapes Classification of Triangles
Competency	Formulate
Item Type	Closed Constructed Response
Full Credit (Full Score)	Yes, reasoning involves property of a perpendicular bisector. Response Sample: <ul style="list-style-type: none"> Yes, H is mid-point of BC and GK and AH is perpendicular on it. Therefore, AH is a perpendicular bisector of GK.
No Credit (No Score)	Any other response or missing response

Item Number	Question 4
Question Code	SAS21M06S0504
Grade & Chapter Name	Grade 6 Understanding Elementary Shapes
Concept Sub-concept	Geometry/Shapes Classification of Triangles
Competency	Interpret & Evaluate
Item Type	Closed Constructed Response
Full Credit (Full Score)	No, reasoning involves property of an isosceles triangle. <ul style="list-style-type: none"> No, triangle IJL is not an isosceles triangle as there is no pair of equal sides. No, triangle IJL is not an isosceles triangle as all its three sides are unequal.
No Credit (No Score)	Any other response or missing response

Item Number	Question 5
Question Code	SAS21M06S0505
Grade & Chapter Name	Grade 6 Understanding Elementary Shapes
Concept Sub-concept	Geometry/Shapes Classification of Triangles
Competency	Formulate
Item Type	Closed Constructed Response
Full Credit (Full Score)	Reflex angle Obtuse angle
No Credit (No Score)	Any other response or missing response

Item Number	Question 6
Question Code	SAS21M06S0506
Grade & Chapter Name	Grade 6 Understanding Elementary Shapes
Concept Sub-concept	Geometry/Shapes Quadrilaterals
Competency	Interpret & Evaluate
Item Type	Closed Constructed Response
Full Credit (Full Score)	Parallelogram, reasoning involves properties of a parallelogram. <ul style="list-style-type: none"> PQUV is a parallelogram as its opposite sides are parallel. PQUV is a parallelogram as PQ is parallel to UV and QU is parallel to PV.
No Credit (No Score)	Any other response or missing response

Item Number	Question 7
Question Code	SAS21M06S0507
Grade & Chapter Name	Grade 6 Understanding Elementary Shapes
Concept Sub-concept	Geometry/Shapes Quadrilaterals
Competency	Employ
Item Type	Multiple Choice Question
Full Credit (Full Score)	A. PQRS
No Credit (No Score)	Any other response or missing response

Item Number	Question 8
Question Code	SAS21M06S0508
Grade & Chapter Name	Grade 6 Understanding Elementary Shapes
Concept Sub-concept	Geometry/Shapes Quadrilaterals
Competency	Interpret & Evaluate
Item Type	Closed Constructed Response
Full Credit (Full Score)	No, reasoning involves side length/angle properties of a rhombus. <ul style="list-style-type: none"> No, there is no information on side lengths of PWUS. No, there is no information regarding the opposite angles of PWUS.
No Credit (No Score)	Any other response or missing response

Item Number	Question 9
Question Code	SAS21M06S0509
Grade & Chapter Name	Grade 6 Understanding Elementary Shapes
Concept Sub-concept	Geometry/Shapes 3D shapes
Competency	Employ
Item Type	Multiple Choice Question
Full Credit (Full Score)	B. Cylinder
No Credit (No Score)	Any other response or missing response

Item Number	Question 10
Question Code	SAS21M06S0510
Grade & Chapter Name	Grade 6 Understanding Elementary Shapes
Concept Sub-concept	Geometry/Shapes 3D shapes
Competency	Formulate
Item Type	Multiple Choice Question
Full Credit (Full Score)	A. 0
No Credit (No Score)	Any other response or missing response

Item Number	Question 1
Question Code	SAS21M06N0601
Grade & Chapter Name	Grade 6 Integers
Concept Sub-concept	Numbers/Representation of Numbers Positive and Negative Integers
Competency	Interpret & Evaluate
Item Type	Closed Constructed Response
Full Credit (Full Score)	City C
No Credit (No Score)	Any other response or missing response

Item Number	Question 2
Question Code	SAS21M06N0602
Grade & Chapter Name	Grade 6 Integers
Concept Sub-concept	Numbers/Representation of Numbers Positive and Negative Integers
Competency	Formulate
Item Type	Closed Constructed Response
Full Credit (Full Score)	-28
No Credit (No Score)	Any other response or missing response

Item Number	Question 3
Question Code	SAS21M06N0603
Grade & Chapter Name	Grade 6 Integers
Concept Sub-concept	Numbers/Representation of Numbers Positive and Negative Integers
Competency	Employ
Item Type	Closed Constructed Response
Full Credit (Full Score)	-27 -27 m -27 metres
No Credit (No Score)	Any other response or missing response

Item Number	Question 4
Question Code	SAS21M06N0604
Grade & Chapter Name	Grade 6 Integers
Concept Sub-concept	Numbers/Representation of Numbers Positive and Negative Integers
Competency	Employ
Item Type	Closed Constructed Response
Full Credit (Full Score)	25 25 m 25 metres
No Credit (No Score)	Any other response or missing response

Item Number	Question 5
Question Code	SAS21M06N0605
Grade & Chapter Name	Grade 6 Integers
Concept Sub-concept	Numbers/Representation of Numbers Positive and Negative Integers
Competency	Interpret & Evaluate
Item Type	Closed Constructed Response
Full Credit (Full Score)	83 83 m 83 metres
No Credit (No Score)	Any other response or missing response

Item Number	Question 6
Question Code	SAS21M06N0606
Grade & Chapter Name	Grade 6 Integers
Concept Sub-concept	Numbers/Representation of Numbers Positive and Negative Integers
Competency	Interpret & Evaluate
Item Type	Multiple Choice Question
Full Credit (Full Score)	D. -8 is the additive inverse of 8
No Credit (No Score)	Any other response or missing response

Item Number	Question 7
Question Code	SAS21M06N0607
Grade & Chapter Name	Grade 6 Integers
Concept Sub-concept	Numbers/Representation of Numbers Number Line
Competency	Employ
Item Type	Multiple Choice Question
Full Credit (Full Score)	B. 6371 km
No Credit (No Score)	Any other response or missing response

Item Number	Question 8
Question Code	SAS21M06N0608
Grade & Chapter Name	Grade 6 Integers
Concept Sub-concept	Numbers/Representation of Numbers Number Line
Competency	Formulate
Item Type	Closed Constructed Response
Full Credit (Full Score)	-7671 km
No Credit (No Score)	Any other response or missing response

Item Number	Question 9
Question Code	SAS21M06N0609
Grade & Chapter Name	Grade 6 Integers
Concept Sub-concept	Numbers/Representation of Numbers Number Line
Competency	Employ
Item Type	Closed Constructed Response
Full Credit (Full Score)	4 floors
No Credit (No Score)	Any other response or missing response

Item Number	Question 10
Question Code	SAS21M06N0610
Grade & Chapter Name	Grade 6 Integers
Concept Sub-concept	Numbers/Representation of Numbers Number Line
Competency	Employ
Item Type	Closed Constructed Response
Full Credit (Full Score)	9 floors
No Credit (No Score)	Any other response or missing response

Item Number	Question 1
Question Code	SAS21M06N0701
Grade & Chapter Name	Grade 6 Fractions
Concept Sub-concept	Numbers Multiplication and Division of Fraction
Competency	Employ
Item Type	Multiple Choice Question
Full Credit (Full Score)	C. $\frac{1}{11}$
No Credit (No Score)	Any other response or missing response

Item Number	Question 2
Question Code	SAS21M06N0702
Grade & Chapter Name	Grade 6 Fractions
Concept Sub-concept	Numbers Multiplication and Division of Fraction
Competency	Employ
Item Type	Multiple Choice Question
Full Credit (Full Score)	D. $\frac{5}{11}$
No Credit (No Score)	Any other response or missing response

Item Number	Question 3
Question Code	SAS21M06N0703
Grade & Chapter Name	Grade 6 Fractions
Concept Sub-concept	Numbers Multiplication and Division of Fraction
Competency	Interpret & Evaluate
Item Type	Closed Constructed Response
Full Credit (Full Score)	No, with valid reasoning. <ul style="list-style-type: none"> No, because running on hills and woods covers $\frac{4}{11}$ of the distance which is not equal to half of the total distance.
No Credit (No Score)	Any other response or missing response

Item Number	Question 4
Question Code	SAS21M06N0704
Grade & Chapter Name	Grade 6 Fractions
Concept Sub-concept	Numbers Multiplication and Division of Fraction
Competency	Employ
Item Type	Multiple Choice Question
Full Credit (Full Score)	B. 15 min
No Credit (No Score)	Any other response or missing response


Item Number	Question 5
Question Code	SAS21M06N0705
Grade & Chapter Name	Grade 6 Fractions
Concept Sub-concept	Numbers Multiplication and Division of Fraction
Competency	Employ
Item Type	Closed Constructed Response
Full Credit (Full Score)	$\frac{5}{11}$ hr
Partial Credit (Partial Score)	15 min
No Credit (No Score)	Any other response or missing response

Item Number	Question 6
Question Code	SAS21M06N0706
Grade & Chapter Name	Grade 6 Fractions
Concept Sub-concept	Numbers Multiplication and Division of Fraction
Competency	Interpret & Evaluate
Item Type	Closed Constructed Response
Full Credit (Full Score)	<p>No, with valid reasoning.</p> <ul style="list-style-type: none"> No, the statement is not correct because Katherine covered a distance of 5 km in 15 min or in $\frac{1}{4}$ hr and 6 km distance in 45 min or in $\frac{3}{4}$ hr, which implies that she took unequal time to cover per kilometre distance.
No Credit (No Score)	Any other response or missing response

Item Number	Question 7
Question Code	SAS21M06N0707
Grade & Chapter Name	Grade 6 Fractions
Concept Sub-concept	Numbers Multiplication and Division of Fraction
Competency	Interpret & Evaluate
Item Type	Closed Constructed Response
Full Credit (Full Score)	<p>No, with valid reasoning showing the difference between equal parts and equal halves.</p> <ul style="list-style-type: none"> No, because the pizza is divided into three equal parts, which is not half of the pizza.
No Credit (No Score)	Any other response or missing response

Item Number	Question 8
Question Code	SAS21M06N0708
Grade & Chapter Name	Grade 6 Fractions
Concept Sub-concept	Numbers Multiplication and Division of Fraction
Competency	Employ
Item Type	Multiple Choice Question
Full Credit (Full Score)	D. $\frac{1}{3}$
No Credit (No Score)	Any other response or missing response

Item Number	Question 9
Question Code	SAS21M06N0709
Grade & Chapter Name	Grade 6 Fractions
Concept Sub-concept	Numbers Multiplication and Division of Fraction
Competency	Interpret & Evaluate
Item Type	Closed Constructed Response
Full Credit (Full Score)	<p>No, with valid reasoning.</p> <ul style="list-style-type: none"> No, because the pizza is not divided into six equal parts.
No Credit (No Score)	Any other response or missing response

Item Number	Question 10
Question Code	SAS21M06N0710
Grade & Chapter Name	Grade 6 Fractions
Concept Sub-concept	Numbers Multiplication and Division of Fraction
Competency	Interpret & Evaluate
Item Type	Closed Constructed Response
Full Credit (Full Score)	<p>Accept any answer in which each part of the division represents $\frac{1}{6}$ of the total.</p> 
No Credit (No Score)	Any other response or missing response

Item Number	Question 1
Question Code	SAS21M06N0801
Grade & Chapter Name	Grade 6 Decimals
Concept Sub-concept	Numbers Addition of Decimals
Competency	Formulate
Item Type	Multiple Choice Question
Full Credit (Full Score)	C. House number 159
No Credit (No Score)	Any other response or missing response

Item Number	Question 2
Question Code	SAS21M06N0802
Grade & Chapter Name	Grade 6 Decimals
Concept Sub-concept	Numbers Addition of Numbers with Decimals
Competency	Employ
Item Type	Closed Constructed Response
Full Credit (Full Score)	23.64 kg
No Credit (No Score)	Any other response or missing response

Item Number	Question 3
Question Code	SAS21M06N0803
Grade & Chapter Name	Grade 6 Decimals
Concept Sub-concept	Numbers Addition of Numbers with Decimals
Competency	Employ
Item Type	Closed Constructed Response
Full Credit (Full Score)	5.02 kg
No Credit (No Score)	Any other response or missing response

Item Number	Question 4
Question Code	SAS21M06N0804
Grade & Chapter Name	Grade 6 Decimals
Concept Sub-concept	Numbers Addition of Numbers with Decimals
Competency	Employ
Item Type	Closed Constructed Response
Full Credit (Full Score)	19.9 19.9 g 19.9 grams
No Credit (No Score)	Any other response or missing response

Item Number	Question 5
Question Code	SAS21M06N0805
Grade & Chapter Name	Grade 6 Decimals
Concept Sub-concept	Numbers Addition of Numbers with Decimals
Competency	Formulate
Item Type	Multiple Choice Question
Full Credit (Full Score)	A. Saturated fatty acids
No Credit (No Score)	Any other response or missing response

Item Number	Question 6
Question Code	SAS21M06N0806
Grade & Chapter Name	Grade 6 Decimals
Concept Sub-concept	Numbers Addition of Numbers with Decimals
Competency	Interpret & Evaluate
Item Type	Closed Constructed Response
Full Credit (Full Score)	Yes, with valid reasoning involving a comparison of sugar and protein content per 100 g of cookies. <ul style="list-style-type: none"> Yes, because the sugar content per 100 g of cookies is 24.5 g which is nearly three times the protein content ($7 \times 3 = 21$ g) present.
No Credit (No Score)	Any other response or missing response

Item Number	Question 7
Question Code	SAS21M06N0807
Grade & Chapter Name	Grade 6 Decimals
Concept Sub-concept	Numbers Addition of Numbers with Decimals
Competency	Employ
Item Type	Closed Constructed Response
Full Credit (Full Score)	2.5°C
No Credit (No Score)	Any other response or missing response

Item Number	Question 8
Question Code	SAS21M06N0808
Grade & Chapter Name	Grade 6 Decimals
Concept Sub-concept	Numbers Addition of Numbers with Decimals
Competency	Employ
Item Type	Closed Constructed Response
Full Credit (Full Score)	6°C
No Credit (No Score)	Any other response or missing response

Item Number	Question 9
Question Code	SAS21M06N0809
Grade & Chapter Name	Grade 6 Decimals
Concept Sub-concept	Numbers Addition of Numbers with Decimals
Competency	Formulate
Item Type	Multiple Choice Question
Full Credit (Full Score)	B. 160 cm + 3 mm
No Credit (No Score)	Any other response or missing response

Item Number	Question 10
Question Code	SAS21M06N0810
Grade & Chapter Name	Grade 6 Decimals
Concept Sub-concept	Numbers Subtraction of Numbers with Decimals
Competency	Employ
Item Type	Closed Constructed Response
Full Credit (Full Score)	0.3 cm
No Credit (No Score)	Any other response or missing response

Item Number	Question 1
Question Code	SAS21M06D0901
Grade & Chapter Name	Grade 6 Data Handling
Concept Sub-concept	Statistics Representation of Bar Graph
Competency	Employ
Item Type	Multiple Choice Question
Full Credit (Full Score)	D. Air Conditioner
No Credit (No Score)	Any other response or missing response

Item Number	Question 2
Question Code	SAS21M06D0902
Grade & Chapter Name	Grade 6 Data Handling
Concept Sub-concept	Statistics Representation of Bar Graph
Competency	Employ
Item Type	Multiple Choice Question
Full Credit (Full Score)	C. 900
No Credit (No Score)	Any other response or missing response

Item Number	Question 3
Question Code	SAS21M06D0903
Grade & Chapter Name	Grade 6 Data Handling
Concept Sub-concept	Statistics Representation of Bar Graph
Competency	Formulate
Item Type	Multiple Choice Question
Full Credit (Full Score)	B. 100
No Credit (No Score)	Any other response or missing response

Item Number	Question 4
Question Code	SAS21M06D0904
Grade & Chapter Name	Grade 6 Data Handling
Concept Sub-concept	Statistics Representation of Bar Graph
Competency	Interpret & Evaluate
Item Type	Multiple Choice Question
Full Credit (Full Score)	B. Image
No Credit (No Score)	Any other response or missing response

Item Number	Question 5
Question Code	SAS21M06D0905
Grade & Chapter Name	Grade 6 Data Handling
Concept Sub-concept	Statistics Representation of Bar Graph
Competency	Employ
Item Type	Multiple Choice Question
Full Credit (Full Score)	C. 900 kWh
No Credit (No Score)	Any other response or missing response

Item Number	Question 6
Question Code	SAS21M06D0906
Grade & Chapter Name	Grade 6 Data Handling
Concept Sub-concept	Statistics Organisation of Data
Competency	Formulate
Item Type	Multiple Choice Question
Full Credit (Full Score)	D. 13
No Credit (No Score)	Any other response or missing response

Item Number	Question 7
Question Code	SAS21M06D0907
Grade & Chapter Name	Grade 6 Data Handling
Concept Sub-concept	Statistics Organisation of Data
Competency	Employ
Item Type	Multiple Choice Question
Full Credit (Full Score)	B. Size 6
No Credit (No Score)	Any other response or missing response

Item Number	Question 8
Question Code	SAS21M06D0908
Grade & Chapter Name	Grade 6 Data Handling
Concept Sub-concept	Statistics Organisation of Data
Competency	Interpret & Evaluate
Item Type	Closed Constructed Response
Full Credit (Full Score)	5 5 pairs
No Credit (No Score)	Any other response or missing response

Item Number	Question 9
Question Code	SAS21M06D0909
Grade & Chapter Name	Grade 6 Data Handling
Concept Sub-concept	Statistics Organisation of Data
Competency	Interpret & Evaluate
Item Type	Multiple Choice Question
Full Credit (Full Score)	B. Shoe size 7 sold the most now
No Credit (No Score)	Any other response or missing response

Item Number	Question 10
Question Code	SAS21M06D0910
Grade & Chapter Name	Grade 6 Data Handling
Concept Sub-concept	Statistics Organisation of Data
Competency	Employ
Item Type	Closed Constructed Response
Full Credit (Full Score)	Rs 5600
No Credit (No Score)	Any other response or missing response

Item Number	Question 1
Question Code	SAS21M06S1001
Grade & Chapter Name	Grade 6 Mensuration
Concept Sub-concept	Measurement Area of Rectangle
Competency	Employ
Item Type	Multiple Choice Question
Full Credit (Full Score)	D. 10,800
No Credit (No Score)	Any other response or missing response

Item Number	Question 2
Question Code	SAS21M06S1002
Grade & Chapter Name	Grade 6 Mensuration
Concept Sub-concept	Measurement Perimeter of Rectangle
Competency	Employ
Item Type	Multiple Choice Question
Full Credit (Full Score)	C. 270
No Credit (No Score)	Any other response or missing response

Item Number	Question 3
Question Code	SAS21M06S1003
Grade & Chapter Name	Grade 6 Mensuration
Concept Sub-concept	Measurement Perimeter of Rectangle
Competency	Employ
Item Type	Multiple Choice Question
Full Credit (Full Score)	B. 240
No Credit (No Score)	Any other response or missing response

Item Number	Question 4
Question Code	SAS21M06S1004
Grade & Chapter Name	Grade 6 Mensuration
Concept Sub-concept	Measurement Area of Rectangle
Competency	Interpret & Evaluate
Item Type	Closed Constructed Response
Full Credit (Full Score)	Yes, with valid reasoning which involves the comparison between areas of PSUT and TURQ. <ul style="list-style-type: none"> Yes, because the areas of PSUT and TURQ are the same which is 3344 square m
No Credit (No Score)	Any other response or missing response

Item Number	Question 5
Question Code	SAS21M06S1005
Grade & Chapter Name	Grade 6 Mensuration
Concept Sub-concept	Measurement Area of Rectangle
Competency	Employ
Item Type	Multiple Choice Question
Full Credit (Full Score)	C. 480
No Credit (No Score)	Any other response or missing response

Item Number	Question 6
Question Code	SAS21M06S1006
Grade & Chapter Name	Grade 6 Mensuration
Concept Sub-concept	Measurement Perimeter of Rectangle
Competency	Interpret & Evaluate
Item Type	Closed Constructed Response
Full Credit (Full Score)	<p>No, with valid reasoning which involves the comparison between the perimeters of the penalty area and the goal area.</p> <ul style="list-style-type: none"> No, because the perimeter of each penalty area is 112m and the perimeter of each goal area is 64m and 64m is not the half of 112m. No, because the perimeter of each penalty area is 112m and the perimeter of each goal area is 64m and 112m is not the double of 64m.
No Credit (No Score)	Any other response or missing response

Item Number	Question 7
Question Code	SAS21M06S1007
Grade & Chapter Name	Grade 6 Mensuration
Concept Sub-concept	Measurement Perimeter of Rectangle
Competency	Interpret & Evaluate
Item Type	Closed Constructed Response
Full Credit (Full Score)	<p>Yes, with valid reasoning which involves the comparison of the school football field dimensions with FIFA standards.</p> <ul style="list-style-type: none"> Yes, because the length and the width of PQRS are 88m and 76m respectively, which lie within the standard range which is 120m to 90 m for length and 90m to 45m for width. Yes, because the perimeter of PQRS is 328 m which lies within the standard range which is 420m to 270m. Yes, because the area of PQRS is 6688 square m which lies within the standard range which is 10,800 square m to 4050 square m.
No Credit (No Score)	Any other response or missing response

Item Number	Question 8
Question Code	SAS21M06S1008
Grade & Chapter Name	Grade 6 Mensuration
Concept Sub-concept	Measurement Perimeter of Rectangle
Competency	Interpret & Evaluate
Item Type	Closed Constructed Response
Full Credit (Full Score)	280 m
No Credit (No Score)	Any other response or missing response

Item Number	Question 9
Question Code	SAS21M06S1009
Grade & Chapter Name	Grade 6 Mensuration
Concept Sub-concept	Measurement Area of Square
Competency	Employ
Item Type	Multiple Choice Question
Full Credit (Full Score)	A. 81
No Credit (No Score)	Any other response or missing response

Item Number	Question 10
Question Code	SAS21M06S1010
Grade & Chapter Name	Grade 6 Mensuration
Concept Sub-concept	Measurement Perimeter of Square
Competency	Employ
Item Type	Multiple Choice Question
Full Credit (Full Score)	B. 48
No Credit (No Score)	Any other response or missing response

Item Number	Question 1
Question Code	SAS21M06C1101
Grade & Chapter Name	Grade 6 Algebra
Concept Sub-concept	Algebra The Idea of a Variable
Competency	Formulate
Item Type	Multiple Choice Question
Full Credit (Full Score)	B. $20a$
No Credit (No Score)	Any other response or missing response

Item Number	Question 2
Question Code	SAS21M06C1102
Grade & Chapter Name	Grade 6 Algebra
Concept Sub-concept	Algebra The Idea of a Variable
Competency	Formulate
Item Type	Multiple Choice Question
Full Credit (Full Score)	C. $20a + 40$
No Credit (No Score)	Any other response or missing response

Item Number	Question 3
Question Code	SAS21M06C1103
Grade & Chapter Name	Grade 6 Algebra
Concept Sub-concept	Algebra The Idea of a Variable
Competency	Employ
Item Type	Closed Constructed Response
Full Credit (Full Score)	Accept answers with $a + 5$ as the cost of storybook $15(a + 5)$ $15a + 75$
No Credit (No Score)	Any other response or missing response

Item Number	Question 4
Question Code	SAS21M06C1104
Grade & Chapter Name	Grade 6 Algebra
Concept Sub-concept	Algebra The Idea of a Variable
Competency	Formulate
Item Type	Multiple Choice Question
Full Credit (Full Score)	B. 40
No Credit (No Score)	Any other response or missing response

Item Number	Question 5
Question Code	SAS21M06C1105
Grade & Chapter Name	Grade 6 Algebra
Concept Sub-concept	Algebra Algebraic Expressions (Expressions with Variables)
Competency	Formulate
Item Type	Multiple Choice Question
Full Credit (Full Score)	C. $p - 7$
No Credit (No Score)	Any other response or missing response

Item Number	Question 6
Question Code	SAS21M06C1106
Grade & Chapter Name	Grade 6 Algebra
Concept Sub-concept	Algebra Algebraic Expressions (Expressions with Variables)
Competency	Formulate
Item Type	Multiple Choice Question
Full Credit (Full Score)	D. $p + q - 7$
No Credit (No Score)	Any other response or missing response

Item Number	Question 7
Question Code	SAS21M06C1107
Grade & Chapter Name	Grade 6 Algebra
Concept Sub-concept	Algebra Algebraic Expressions (Expressions with Variables)
Competency	Formulate
Item Type	Multiple Choice Question
Full Credit (Full Score)	C. $14 + 6 = 6 + 14$
No Credit (No Score)	Any other response or missing response

Item Number	Question 8
Question Code	SAS21M06C1108
Grade & Chapter Name	Grade 6 Algebra
Concept Sub-concept	Algebra Algebraic Expressions (Use of Variables in Common Rules)
Competency	Formulate
Item Type	Multiple Choice Question
Full Credit (Full Score)	A. n
No Credit (No Score)	Any other response or missing response

Item Number	Question 9
Question Code	SAS21M06C1109
Grade & Chapter Name	Grade 6 Algebra
Concept Sub-concept	Algebraic Expressions Use of Variables in Common Rules/Rules from Geometry
Competency	Formulate
Item Type	Closed Constructed Response
Full Credit (Full Score)	Multiple of 4 with any variable • $4n$ or $4p$ or $4s$
No Credit (No Score)	Any other response or missing response

Item Number	Question 10
Question Code	SAS21M06C1110
Grade & Chapter Name	Grade 6 Algebra
Concept Sub-concept	Algebraic Expressions Use of Variables in Common Rules/Rules from Geometry
Competency	Formulate
Item Type	Multiple Choice Question
Full Credit (Full Score)	D. $\frac{n}{2} - 1$
No Credit (No Score)	Any other response or missing response

Item Number	Question 1
Question Code	SAS21M06C1201
Grade & Chapter Name	Grade 6 Ratio and Proportion
Concept Sub-concept	Ratio and Proportion Ratio
Competency	Employ
Item Type	Multiple Choice Question
Full Credit (Full Score)	B. 1:5
No Credit (No Score)	Any other response or missing response

Item Number	Question 2
Question Code	SAS21M06C1202
Grade & Chapter Name	Grade 6 Ratio and Proportion
Concept Sub-concept	Ratio and Proportion Ratio/Comparing Quantities
Competency	Employ
Item Type	Closed Constructed Response
Full Credit (Full Score)	1:4
No Credit (No Score)	Any other response or missing response

Item Number	Question 3
Question Code	SAS21M06C1203
Grade & Chapter Name	Grade 6 Ratio and Proportion
Concept Sub-concept	Ratio and Proportion Ratio (Unitary Method)
Competency	Employ
Item Type	Multiple Choice Question
Full Credit (Full Score)	D. 54
No Credit (No Score)	Any other response or missing response

Item Number	Question 4
Question Code	SAS21M06C1204
Grade & Chapter Name	Grade 6 Ratio and Proportion
Concept Sub-concept	Ratio and Proportion Ratio (Unitary Method)
Competency	Employ
Item Type	Closed Constructed Response
Full Credit (Full Score)	Rs 200
No Credit (No Score)	Any other response or missing response

Item Number	Question 5
Question Code	SAS21M06C1205
Grade & Chapter Name	Grade 6 Ratio and Proportion
Concept Sub-concept	Ratio and Proportion Ratio (Unitary Method)
Competency	Interpret & Evaluate
Item Type	Multiple Choice Question
Full Credit (Full Score)	A. 2:5
No Credit (No Score)	Any other response or missing response

Item Number	Question 6
Question Code	SAS21M06C1206
Grade & Chapter Name	Grade 6 Ratio and Proportion
Concept Sub-concept	Ratio and Proportion Proportion (Unitary Method)
Competency	Employ
Item Type	Multiple Choice Question
Full Credit (Full Score)	C. Rs 840
No Credit (No Score)	Any other response or missing response

Item Number	Question 7
Question Code	SAS21M06C1207
Grade & Chapter Name	Grade 6 Ratio and Proportion
Concept Sub-concept	Ratio and Proportion Proportion
Competency	Interpret & Evaluate
Item Type	Closed Constructed Response
Full Credit (Full Score)	Darsh's response is not correct with valid justification explaining order of terms in proportion. <ul style="list-style-type: none"> Darsh's response is not correct because $6/8 \neq 40/30$.
No Credit (No Score)	Any other response or missing response

Item Number	Question 8
Question Code	SAS21M06C1208
Grade & Chapter Name	Grade 6 Ratio and Proportion
Concept Sub-concept	Ratio and Proportion Ratio
Competency	Employ
Item Type	Multiple Choice Question
Full Credit (Full Score)	C. 1:75.2
No Credit (No Score)	Any other response or missing response

Item Number	Question 9
Question Code	SAS21M06C1209
Grade & Chapter Name	Grade 6 Ratio and Proportion
Concept Sub-concept	Ratio and Proportion Proportion
Competency	Interpret & Evaluate
Item Type	Closed Constructed Response
Full Credit (Full Score)	<p>No, the model of the pitch drawn by Aarav is not proportional to the actual pitch with valid reasoning</p> <ul style="list-style-type: none"> No, the model of the pitch drawn by Aarav is not proportional to the actual pitch with valid reasoning as $22.56/3.66 \neq 30/10$ or $3.66/22.56 \neq 10/30$
No Credit (No Score)	Any other response or missing response

Item Number	Question 10
Question Code	SAS21M06C1210
Grade & Chapter Name	Grade 6 Ratio and Proportion
Concept Sub-concept	Ratio and Proportion Ratio
Competency	Employ
Item Type	Multiple Choice Question
Full Credit (Full Score)	B. 7.9
No Credit (No Score)	Any other response or missing response

Item Number	Question 1
Question Code	SAS21M06S1301
Grade & Chapter Name	Grade 6 Symmetry
Concept Sub-concept	Geometry Line of Symmetry
Competency	Formulate
Item Type	Closed Constructed Response
Full Credit (Full Score)	4
No Credit (No Score)	Any other response or missing response

Item Number	Question 2
Question Code	SAS21M06S1302
Grade & Chapter Name	Grade 6 Symmetry
Concept Sub-concept	Geometry Line of Symmetry
Competency	Employ
Item Type	Multiple Choice Question
Full Credit (Full Score)	C. Dividing an angle into two equal parts
No Credit (No Score)	Any other response or missing response

Item Number	Question 3
Question Code	SAS21M06S1303
Grade & Chapter Name	Grade 6 Symmetry
Concept Sub-concept	Geometry Line of Symmetry
Competency	Formulate
Item Type	Closed Constructed Response
Full Credit (Full Score)	<p>Student response should explain that the fold has been made in opposite directions.</p> <ul style="list-style-type: none"> • Step 2 fold in front step 3 fold backwards • Step 2 and 3 have been folded on opposite sides • Folded in opposite directions • Opposite folds
No Credit (No Score)	<p>Any other response or missing response</p> <p>Incomprehensible or too generic statements</p> <ul style="list-style-type: none"> • By paper folding • Two folds are made • Paper was of different colour

Item Number	Question 4
Question Code	SAS21M06S1304
Grade & Chapter Name	Grade 6 Symmetry
Concept Sub-concept	Geometry Line of Symmetry
Competency	Interpret & Evaluate
Item Type	Multiple Choice Question
Full Credit (Full Score)	B. 1
No Credit (No Score)	Any other response or missing response

Item Number	Question 5
Question Code	SAS21M06S1305
Grade & Chapter Name	Grade 6 Symmetry
Concept Sub-concept	Geometry Mirror Reflection
Competency	Interpret & Evaluate
Item Type	Multiple Choice Question
Full Credit (Full Score)	D. Image
No Credit (No Score)	Any other response or missing response

Item Number	Question 6
Question Code	SAS21M06S1306
Grade & Chapter Name	Grade 6 Symmetry
Concept Sub-concept	Geometry Line of Symmetry
Competency	Formulate
Item Type	Closed Constructed Response
Full Credit (Full Score)	12 12 line of symmetry
No Credit (No Score)	Any other response or missing response

Item Number	Question 7
Question Code	SAS21M06S1307
Grade & Chapter Name	Grade 6 Symmetry
Concept Sub-concept	Geometry Line of Symmetry
Competency	Interpret & Evaluate
Item Type	Closed Constructed Response
Full Credit (Full Score)	12
No Credit (No Score)	Any other response or missing response

Item Number	Question 8
Question Code	SAS21M06S1308
Grade & Chapter Name	Grade 6 Symmetry
Concept Sub-concept	Geometry Line of Symmetry
Competency	Employ
Item Type	Closed Constructed Response
Full Credit (Full Score)	Yes, the complete design can be created by repeating this part 5 times. 5 times By repeating 5 times
No Credit (No Score)	Any other response or missing response

Item Number	Question 9
Question Code	SAS21M06S1309
Grade & Chapter Name	Grade 6 Symmetry
Concept Sub-concept	Geometry Line of Symmetry
Competency	Interpret & Evaluate
Item Type	Closed Constructed Response
Full Credit (Full Score)	Yes, one hexagonal part can be repeated to generate the whole design. Any explanation where a sector of 60 degrees is discussed to generate a figure by repeated use. <ul style="list-style-type: none"> • Yes, we can reflect the part horizontally and then reflecting the joined parts vertically.
No Credit (No Score)	Any other response or missing response

Item Number	Question 10
Question Code	SAS21M06S1310
Grade & Chapter Name	Grade 6 Symmetry
Concept Sub-concept	Geometry Line of Symmetry
Competency	Employ
Item Type	Multiple Choice Question
Full Credit (Full Score)	D. Infinite
No Credit (No Score)	Any other response or missing response

Item Number	Question 1
Question Code	SAS21M06S1401
Grade & Chapter Name	Grade 6 Practical Geometry
Concept Sub-concept	Geometry A Line Segment
Competency	Employ
Item Type	Multiple Choice Question
Full Credit (Full Score)	A. 5 cm
No Credit (No Score)	Any other response or missing response

Item Number	Question 2
Question Code	SAS21M06S1402
Grade & Chapter Name	Grade 6 Practical Geometry
Concept Sub-concept	Geometry A Line Segment
Competency	Employ
Item Type	Multiple Choice Question
Full Credit (Full Score)	B. EF and GH are perpendicular to AB
No Credit (No Score)	Any other response or missing response

Item Number	Question 3
Question Code	SAS21M06S1403
Grade & Chapter Name	Grade 6 Practical Geometry
Concept Sub-concept	Geometry Radius of a Circle
Competency	Employ
Item Type	Multiple Choice Question
Full Credit (Full Score)	D. Its length can be greater than 7.6 cm
No Credit (No Score)	Any other response or missing response

Item Number	Question 4
Question Code	SAS21M06S1404
Grade & Chapter Name	Grade 6 Practical Geometry
Concept Sub-concept	Geometry Chord of a Circle
Competency	Formulate
Item Type	Closed Constructed Response
Full Credit (Full Score)	No, RQ is not a chord of the circle with valid reasoning. <ul style="list-style-type: none"> No, RQ is not a chord because both end point R does not lie on the circle.
No Credit (No Score)	Any other response or missing response

Item Number	Question 5
Question Code	SAS21M06S1405
Grade & Chapter Name	Grade 6 Practical Geometry
Concept Sub-concept	Geometry A Line of Symmetry
Competency	Interpret & Evaluate
Item Type	Closed Constructed Response
Full Credit (Full Score)	Bhupesh is correct with valid justification <ul style="list-style-type: none"> Bhupesh is correct because $\angle PQS = \angle SQR$ and QS is common to both. That is why QS is the line of symmetry for $\angle PQR$ as QS bisects $\angle PQR$.
No Credit (No Score)	Any other response or missing response

Item Number	Question 6
Question Code	SAS21M06S1406
Grade & Chapter Name	Grade 6 Practical Geometry
Concept Sub-concept	Geometry A Line of Symmetry
Competency	Employ
Item Type	Multiple Choice Question
Full Credit (Full Score)	B. 30°
No Credit (No Score)	Any other response or missing response

Item Number	Question 7
Question Code	SAS21M06S1407
Grade & Chapter Name	Grade 6 Practical Geometry
Concept Sub-concept	Geometry A Line of Symmetry
Competency	Interpret & Evaluate
Item Type	Multiple Choice Question
Full Credit (Full Score)	C. 60°
No Credit (No Score)	Any other response or missing response

Item Number	Question 8
Question Code	SAS21M06S1408
Grade & Chapter Name	Grade 6 Practical Geometry
Concept Sub-concept	Geometry Radius of a circle
Competency	Employ
Item Type	Multiple Choice Question
Full Credit (Full Score)	C. 9 cm
No Credit (No Score)	Any other response or missing response

Item Number	Question 9
Question Code	SAS21M06S1409
Grade & Chapter Name	Grade 6 Practical Geometry
Concept Sub-concept	Geometry Radius of a circle
Competency	Interpret & Evaluate
Item Type	Closed Constructed Response
Full Credit (Full Score)	No, with valid justification <ul style="list-style-type: none"> No, all five circles are not concentric as they have different centres. Concentric circles have one common centre.
No Credit (No Score)	Any other response or missing response

Item Number	Question 10
Question Code	SAS21M06S1410
Grade & Chapter Name	Grade 6 Practical Geometry
Concept Sub-concept	Geometry A Line of Symmetry
Competency	Employ
Item Type	Closed Constructed Response
Full Credit (Full Score)	3 3 parts
No Credit (No Score)	Any other response or missing response