Sri aurobinito Society



केंद्रीय माध्यमिक शिक्षा बोर्ड CENTRAL BOARD OF SECONDARY EDUCATION

Curriculum Aligned Competency Based Test Items Mathematics Class 6 – Chapter 1 Knowing Our Numbers



SAS21M06Q0101

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

A. 45 metres

1

- 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

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3

Curriculum Aligned Competency Based Test Items



Mathematics Class 6 – Chapter 1

SAS21M06Q0103

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?

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Curriculum Aligned Competency Based Test Items



Mathematics Class 6 – Chapter 1

SAS21M06Q0105



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.





7

8

9

Curriculum Aligned Competency Based Test Items



Mathematics Class 6 – Chapter 1

SAS21M06Q0107

Where should she place the remaining card to form a number greater than the number formed by Aman?

- A. After 9
- B. Before 0
- C. Between 5 and 7
- D. 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

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

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?

Answers

Mathematics Class 6 – Chapter 1

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



Curriculum Aligned Competency Based Test Items

Mathematics Class 6 – Chapter 1

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

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Curriculum Aligned Competency Based Test Items

Mathematics Class 6 – Chapter 1

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 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

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