



Maharashtra Academic Authority, Pune 30.

Educationally Progressive Maharashtra (EPM)

Test for Academic Progress : Summative Evaluation 2 : 2017-18

Subject : Mathematics (Written)

Teacher's Guidelines along with Practical and Oral Test Papers (for Std. I to VIII)

Role and change in vision :

The Government of Maharashtra initiated 'Pragat Shaikshanik Maharashtra' programme vide Government Resolution 22nd June 2015, under that it has been decided to take Three Educational Achievement Test for first language and mathematics within a year. This programmes aims at :

- Designing various Educational Achievement Test and testing whether each student has achieved age-appropriate competencies or not.
- There by planning remedial programmes and action plans to assist students.

Within this programmes Third Test is 'Summative Evaluation 2'. According to this, test will be conducted for standard 1 to 8 for First Language, Mathematics, English and General Science at State Level. Teachers will be required to note the result of these four subjects in the CCE notebook provided by the school. Please note that no further tests will be required at school level for these test for Summative - 2.

There are three stages for planning and implementation of these tests :

1. Preplanning
2. Conducting tests
3. Collection of data

Teachers must collect or prepare necessary material required to conduct Oral/Practical tests. Depending on the number of students, teachers should have a time management plan for Oral/Practical tests.

There is no time limit for these tests. Tests should be given to students when their attention span is maximum. Avoid scheduling tests close to recess break or when students are expected to be tired. If students leave some questions unanswered, teachers should ask whether they need any assistance and should motivate them to solve the questions. However, assistance should be in the form of examples only. Teachers should refrain from directing them towards the answer.

Nature of the test :

The 'Summative Evaluation Test 2' is same as Baseline Test consisting of Oral/Practical and written types of tests weightage of the questions in the test are as follow :

- Based on previous years portion - 20%
- Based on 1st term portion - 20%
- Based on 2st term portion - 60%
- The Evaluation of Summative - 2 test is as per the Continuous Comprehensive Evaluation (CCE) for every standard.

Note: Maths teachers must conduct the test and also evaluate it for their class.

Suggestions for conducting test and correcting the test paper :

For Summative Written Test :

1. **For Std. I :** Q. 1 and Q. 2 are based on 1st term portion.
2. **For Std. II to VIII :** Q. 1 and Q. 2 are based on basic concepts and 1st term position.
3. **Q. 3, Q.4, Q.5 :** are based on concepts of 2nd term portion.
 - **For Std. I to V :** Teacher must read the question to the students, explain what to do and then ask students to solve it. Do not point towards direct answers.
 - **For Std. VI and VIII :** Read the questions for only those students who need help.
 - For the questions having one mark, allow students to do the rough work in the space provided. Give full credit for correct answer.
 - **For 2 Marks questions :** Give one mark or two marks. Don't give half mark or marks in fraction.
 - Over look the spellings or minor mistakes in solution.
 - Give full credit even though the student uses Devnagari or International numerals or both, even in one answer.
 - **For Std. I to VI :** For the written test each sub-question carries 1 mark.
 - **For Std. VII and VIII :** In the written test
Q. No. 1 to 3 each sub-question for carries
Q. No. 4 to 5 each sub-question carries 2 Marks.

So take precautions while entering the marks in the record sheet.

- There is only one Record Sheet for written, practical and oral test. Marks should be noted question-wise for each student. The total marks of the students should be shown and to be filled in the 'SARAL' database system. However at school level a note must be made of how many student answered each question correctly and an action plan must be prepared for remedial measures according to the felt need.

Instructions for conducting Oral and Practical test :

1. Collect and keep ready adequate quantity/number of materials (easily availables and previously used) given in the list, before starting the test. Prepare and keep the cards ready. Note that this test is to be conducted with students actually using material.
2. Conduct the practical test with 5 children at a time sitting in a semicircle. Give them enough time. Other students should sit away from the group being tested. Call another group when one group has finished.
3. Response to oral and practical test should be entered directly in the cumulative mark sheets (giving each question either 0 or 1 mark.) Do not give 1/2 mark.
4. **For Std. I to V -** Practical/Oral questions 1 to 10.
For Std. VI to VIII - Practical Question Nos. From P-1 to P-5. Oral Question Nos. From M-1 to M-5. So teacher has to distribute the written test paper for recording the answers of oral test.
5. Question paper of Written Test should be distributed before starting the oral test. Students will write their responses on the first page against the right questions from M-1 to M-5. Oral questions (M-1 to M-5) are to be addressed to the entire class at the same time.

Note : For further detailed information kindly refer to the 'Notes for teachers' related to previously conducted test.

Std. First

Summative Evaluation 2 : 2017-18

Sub. : Mathematics

Practical and Oral Questions

Marks : 10

Sr. No.	Practical / Oral Questions and Concomitant Instructions for Teachers	Students				
		A	B	C	D	E
P/O.1.	Give two objects and ask the students to identify heavy/light object. (Take objects having considerable difference in weight eg. chalk, duster etc.)	-	-	-	-	-
P/O.2.	Ask the students to add the given numbers using some objects. (e.g. seeds, beads etc.)	4 + 2	6 + 4	5 + 0	7 + 2	2 + 3
P/O.3.	Using the groups of tens and units ask the students to write the numbers.	42	50	30	36	25
P/O.4.	Ask the students to make groups of the given number. (using beads, seeds, marbles etc.)	11	15	20	14	17
P/O.5.	Ask the students to count and separate the given number of objects according to the number given into groups of 10-10.	30	20	30	20	30
P/O.6.	Ask the students to identify long/short objects from pen, pencil, measuring scale, chalk etc.	-	-	-	-	-
P/O.7.	Ask the students to find the cost of given pencils, if 1 pencil costs Re.1.	2	4	3	6	5
P/O.8.	Ask the students to read the given number showing the number card.	14	18	20	16	12
P/O.9.	Ask the students to write the name of the day which is immediate after the given day.	Monday	Tuesday	Sunday	Wednesday	Thursday
P/O.10.	Make two groups of the given number using same objects and ask students to identify which is more or less.	6 and 4	7 and 5	6 and 5	7 and 9	8 and 6

Note : Read all the questions carefully before starting practical/oral test and keep the required material ready in adequate number. Use of material for the test is compulsory.

Std. Second

Summative Evaluation 2 : 2017-18

Sub. : Mathematics

Practical and Oral Questions

Marks : 10

Sr. No.	Practical / Oral Questions and Concomitant Instructions for Teachers	Students				
		A	B	C	D	E
P/O.1.	Ask the student to read the number on number card.	17	13	25	18	23
P/O.2.	Ask the student to write the month which is immediate before the given month.	October	May	February	July	December
P/O.3.	Teachers to keep the cut-outs of square, triangle, Rectangle, Circle. Ask thea students to identify the type of shape.	Square	Triangle	Rectangle	Circle	Triangle
P/O.4.	Teachers to keep sets of objects in big and small size. (e.g. pencil, ball, eraser etc). students should identify the size of the object.	-	-	-	-	-
P/O.5.	Ask the students to show the number in tens-units form using beads or sticks.	23	18	36	45	50
P/O.6.	Students to write the given amount using the given coins and notes. (use 1, 2, 5, 10 rupee notes and coins.)	25	30	15	20	10
P/O.7.	Using the groups of tens and units ask the students to identify bigger and smaller number.	15 22	19 29	34 16	47 33	14 26
P/O.8.	Using the number cards from 0 to 9 ask the students to form the given numbers.	41	30	85	92	67
P/O.9.	If one row contains the given number of children, then how many groups can be made from the number, if each group has 2 children.	10	8	12	16	14
P/O. 10.	Give 20 beads to each child. Ask the student to subtract the given number and write the number remaining.	8	7	6	9	7

Note : Read all the questions carefully before starting practical/oral test and keep the required material ready in adequate number. Use of material for the test is compulsory.

Std. Third

Summative Evaluation 2 : 2017-18

Sub. : Mathematics

Practical and Oral Questions

Marks : 10

Sr. No.	Practical / Oral Questions and Concomitant Instructions for Teachers	Students				
		A	B	C	D	E
P/O.1.	Draw the figure of the given object by tracing the border (object having circular or square shape.)	Circle	Rectangle	Square	Circle	Rectangle
P/O.2.	Show the number card and ask to write number which comes just after the given number. (keep number cards ready)	29	32	40	49	18
P/O.3.	Ask students to show edges and corners of objects present in the class. (eg. Table, cupboard, book, notebook, black board, compass-box etc.)	-	-	-	-	-
P/O.4.	Find the length of given object using measuring scale.	Pencil	Pen	Note-book	Paper	Book
P/O.5.	Give 10 objects to each student. Tell them to make group of given numbers. Ask how many groups can be made and how many objects are left.	Group of 4 – 4	Group of 2 – 2	Group of 3 – 3	Group of 5 – 5	Group of 6 – 6
P/O.6.	Draw a circle and shade the fraction given.	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{3}{4}$	$\frac{1}{2}$	$\frac{1}{4}$
P/O.7.	Make any geometrical figure using given objects. (Give enough quantity of beads, seeds, pebbles.)	-	-	-	-	-
P/O.8.	Convert the given amount into coins and notes. (Keep coins and notes ready.)	Rs.135	Rs.155	Rs. 215	Rs. 170	Rs. 230
P/O.9.	Give cut-outs of different shapes and ask them to decide whether it is symmetrical or not by folding it.	-	-	-	-	-
P/O.10.	Ask to subtract given number using tens and units. (Keep enough quantity of tens and units ready)	$\begin{array}{r} 36 \\ - 19 \\ \hline \end{array}$	$\begin{array}{r} 24 \\ - 16 \\ \hline \end{array}$	$\begin{array}{r} 33 \\ - 18 \\ \hline \end{array}$	$\begin{array}{r} 22 \\ - 18 \\ \hline \end{array}$	$\begin{array}{r} 32 \\ - 17 \\ \hline \end{array}$

Note : Read all the questions carefully before starting practical/oral test and keep the required material ready in adequate number. Use of material for the test is compulsory.

Std. Fourth

Summative Evaluation 2 : 2017-18

Sub. : Mathematics

Practical and Oral Questions

Marks : 10

Sr. No.	Practical / Oral Questions and Concomitant Instructions for Teachers	Students				
		A	B	C	D	E
P/O.1.	By using the given three digits make the biggest number. Ask them to read. (Use number cards from 0-9)	$\begin{matrix} \boxed{3} \\ \boxed{5} \\ \boxed{0} \end{matrix}$	$\begin{matrix} \boxed{5} \\ \boxed{2} \\ \boxed{1} \end{matrix}$	$\begin{matrix} \boxed{8} \\ \boxed{3} \\ \boxed{2} \end{matrix}$	$\begin{matrix} \boxed{7} \\ \boxed{4} \\ \boxed{0} \end{matrix}$	$\begin{matrix} \boxed{9} \\ \boxed{6} \\ \boxed{4} \end{matrix}$
P/O.2.	Ask students to identify angle shown by the hands of clock. (Arrange the model of clock to show given angle.)	Obtuse angle	Acute angle	Right angle	Acute angle	Obtuse angle
P/O.3.	Give students circular or square shaped paper and ask them to shade given fraction.	$\frac{2}{4}$	$\frac{1}{4}$	$\frac{3}{4}$	$\frac{4}{4}$	$\frac{1}{4}$
P/O.4.	Find length of given paper using ruler.	13 cm	10 cm	15 cm	12 cm	13 cm
P/O.5.	Ask students to make given amount of money using coins and notes.	Rs. 25	Rs. 100	Rs. 120	Rs. 80	Rs. 45
P/O.6.	Ask them to read number given on card.	2457	8036	2916	8235	6120
P/O.7.	Ask to find area (Give square and rectangle of different measurement having square of one cm.)	-	-	-	-	-
P/O.8.	Convert into centimetres.	$\frac{1}{4}$ m	$1 \frac{1}{4}$ m	$\frac{1}{2}$ m	$\frac{3}{4}$ m	$1 \frac{1}{2}$ m
P/O.9.	Show the calendar of current month and ask.	Which days occur 5 times in a month ?	What is a date on 2nd Monday ?	How many Wednesdays does this month have ?	Next month will start with which day ?	Which day falls on 24 th ?
P/O.10.	If 24 beads are divided into given number of parts. How many beads will be in each part ?	3 parts	4 parts	8 parts	6 parts	2 parts

Note : Read all the questions carefully before starting practical/oral test and keep the required material ready in adequate number. Use of material for the test is compulsory.

Std. Fifth

Summative Evaluation 2 : 2017-18

Sub. : Mathematics

Practical and Oral Questions

Marks : 10

Sr. No.	Practical / Oral Questions and Concomitant Instructions for Teachers	Students				
		A	B	C	D	E
P/O.1.	Giving different circular objects ask the students to measure the circumference using thread/measuring tape/ruler.	Circular plate	Bangle	Cap of a jar	A steel glass	Cap of a wale bottle
P/O.2.	Tell the students to show the given time by arranging the hands of the clock in the model.	5:30	7:15	8:00	9:45	10 minutes past II
P/O.3.	Ask the students to find the perimeter of the given object. (Use cut-out of different shapes.)	-	-	-	-	-
P/O.4.	Tell the students whether they can arrange the given number in triangular form using marbles.	10	20	15	25	21
P/O.5.	Ask the students to calculate the total amount by counting the given notes. (Give students at least 3 different types of denominations and total five notes.)	-	-	-	-	-
P/O.6.	Ask the students to convert the given time into minutes.	$1 \frac{1}{2}$ hour	3 hours	1 hour 45 minutes	one hour	1 hour 15 minutes
P/O.7.	Ask the students to read the Roman numbers from the number card.	V	D	X	C	L
P/O.8.	Ask the students to find the place value of the underlined digit.	43 <u>5</u> 2	<u>5</u> 890	637 <u>1</u>	81 <u>9</u> 2	7 <u>2</u> 542
P/O.9.	Ask the students to find the area of the given card/paper.	$l = 5 \text{ cm}$ $b = 6 \text{ cm}$	$l = 7 \text{ cm}$ $b = 7 \text{ cm}$	$l = 6 \text{ cm}$ $b = 8 \text{ cm}$	$l = 8 \text{ cm}$ $b = 8 \text{ cm}$	$l = 9 \text{ cm}$ $b = 5 \text{ cm}$
P/O.10.	Ask the students to read the given number from the number card. (Teachers to make cards.)	7.5	6.05	0.85	25.06	3.78

Note : Read all the questions carefully before starting practical/oral test and keep the required material ready in adequate number. Use of material for the test is compulsory.

Std. Sixth

Summative Evaluation 2 : 2017-18

Sub. : Mathematics

Practical and Oral Questions

Marks : 10

Sr. No.	Practical / Oral Questions and Concomitant Instructions for Teachers	Students				
		A	B	C	D	E
P 1	Draw a circle of any radius and show the given element.	Radius	Diameter	Chord	Centre	Radius
P 2	Draw the given English alphabet and ask one students to draw its line of symmetry.	D	X	I	T	Y
P 3	Divide the given number of objects into ratio of $\frac{2}{3}$ (Teacher should provide the number of given objects.)	10	15	20	25	30
P 4	Identify the triangle based on sides/angles. keep ready 5 different types of triangles)	-	-	-	-	-
P 5	Draw a perpendicular bisector of line segment of given measurement.	5.4 cm	6 cm	6.6 cm	4.8 cm	8 cm

Oral Questions

- Instructions :**
- 1) Students are expected to work out the solutions mentally and write the answers.
 - 2) Distribute the written test papers to students before asking oral questions. Then ask the question to whole class at a time, Ask them to write the answers before numbers M1 to M5.

M1 : Write any four digit number where the place value of digit 5 is 500.

M2 : Write the measurement of any reflex angle.

M3 : Convert $\frac{1}{2}$ into percentage.

M4 : Find the ratio of 25 to 75.

M5 : Write the sum of measurement of all four angles of a rectangle.

Note : Teachers should read the test questions before hand. they should keep all the materials required to carryout the test ready in sufficient quantity. Use of material is must while carrying out the test.

Practical and Oral Questions

Marks : 10

Sr. No.	Practical / Oral Questions and Concomitant Instructions for Teachers	Students				
		A	B	C	D	E
P 1	Ask the students to draw the given type of triangle and draw the perpendicular bisector of any one side. (Draw conclusion of)	Acute angled triangle	Right angled triangle	Obtuse angled triangle	Right angled triangle	Acute angled triangle
P 2	Ask the students to draw circle any radius and show the given element of the circle.	Major arc	Central Angle	Minor arc	Major arc	semi circular arc
P 3	Ask the students to measure the length, breadth and height of the given cuboidal object and find the total surface area of that cuboidal object. (Teacher should arrange for different cuboidal objects)	Different cuboidal objects (e.g. Brick, Chalk box, Box etc.)				
P 4	Ask the students to draw angles in linear pair.					
P 5	Ask the students to measure the base and height of the given triangle and find the area of the triangle. (Teacher should keep the cut-outs of card sheets)	Acute angled triangle	Right angled triangle	Obtuse angled triangle	Acute angled triangle	Right angled triangle

Oral Questions

Instructions : 1) Students are expected to write answers by mental calculation.

2) Distribute the question paper for written test. Read the questions for oral test one by one. Ask the students to write their responses from M1 to M5 in the question paper of written test.

M 1 : When more than two lines intersect at one point, what is that point called ?

M 2 : Write even prime number.

M 3 : To put a fencing around a rectangular farmland, what is required to be known ? Area or perimeter of a farmland ?

M 4 : Write any binomial term using x as a variable.

M 5 : Find the selling price of the article, if the cost price is ₹ 150 and the profit percentage is 20%.

Note : 1) Read the questions for oral and practical test.

2) Make the necessary material available in enough quantity well in advance.

3) It is a must to conduct the test using the prescribed material.

Std. Eighth

Summative Evaluation 2 : 2017-18

Sub. : Mathematics

Practical and Oral Questions

Marks : 10

Sr. No.	Practical / Oral Questions and Concomitant Instructions for Teachers	Students				
		A	B	C	D	E
P 1	One side of an equilateral triangle is given. Ask the students to draw the triangle accordingly.	3 cm	3.5 cm	5 cm	4 cm	4.5 cm
P 2	Ask to students to draw a line segment AB of 6.7cm and divide the line segment into given ratio.	3 : 2	2 : 3	1 : 2	2 : 1	3 : 1
P 3	Give different rectangular paper cut-outs to the students. Ask the students to make a cylindrical shape and find the curved surface area of that cylinder. Also ask them to measure the area of the rectangular paper and find out whether they are same or not. Tell them to write the curved surface area of the cylinder.	-	-	-	-	-
P 4	Ask the students to draw a circle of any radius having centre 'O' and show the following in the circle. a) Inscribed angle $\angle ABC$ b) Intercepted arc AXC c) central angle $\angle AOC$ Ask the students to measure the $\angle ABC$ and $\angle AOC$ and find the relation in them.	-	-	-	-	-
P 5	The adjacent sides of a rectangle ABCD are given i.e measure of sides AB and BC are given. Ask the students to construct $\square ABCD$	AB = 3cm BC = 4cm	AB = 6cm BC = 8cm	AB = 4.5 cm BC = 6cm	AB = 5cm BC = 12cm	AB = 5cm BC = 7cm

Oral Questions

- Instructions :**
- 1) Students are expected to write answers by mental calculation.
 - 2) Distribute the question paper for written test. Read the questions for oral test one by one. Ask the students to write their responses from M1 to M5 in the question paper of written test.

M 1 : Write the complementary pair of 70° .

M 2 : Find the value of $\sqrt{121}$.

M 3 : Using any variable write a polynomial having degree 3.

M 4 : Write the measure of semicircular arc.

M 5 : Write any 2 numbers such that their product is 40 and sum is 14.

Note : Teachers should read the test questions before hand. they should keep all the materials required to carryout the test ready in sufficient quantity. Use of material is must while carrying out the test.