**TEST ITEM 11.1GRASSLAND WITH A FLOWERBED**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- QUADRATIC EQUATIONS | CLASS :- X  EXPECTED TIME :- 4 MIN  TOTAL CREDIT :- 2 |
| DESCRIPTION OF ITEM  TEXT AND IMAGE | LEARNING OUTCOMES :- | To make the students aware of the properties of rectangle and solve quadratic equation. |

**MATHEMATICAL LITERACY**

|  |  |
| --- | --- |
| FRAMEWORK | CHARACTERISTICS |
| Competency Cluster | Connections |
| Overarching Idea | Space and shape |
| Context | Societal |
| Item Format | Simple multiple choice |
| Cognitive process | Interpreting , problem solving. |
| Proficiency level | 2 |

**Credit Pattern:**

Full Credit:2Partial Credit: 1No Credit: 0

**Description of Answer Key and Credits:**

|  |
| --- |
| ANSWERS 11.1 Full credit ( b) (3x + 3) mNo credit Other responses and missing |

Name of the Teacher/Item Writer: JayashreeAgasti

Designation: TGT Mathematics

Email: jayuagasti@gmail.com

Phone No.:9926412336

Name of the Vidyalaya: K. V. Mhow

KVS Region: Bhopal

**TEST ITEM 11.2GRASSLAND WITH A FLOWERBED**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- QUADRATIC EQUATIONS | CLASS :- X  EXPECTED TIME :- 4 MIN  TOTAL CREDIT :- 2 |
| DESCRIPTION OF ITEM  TEXT AND IMAGE | LEARNING OUTCOMES :- | To make the students aware of the properties of rectangle and solve quadratic equation. |

**MATHEMATICAL LITERACY**

|  |  |
| --- | --- |
| FRAMEWORK | CHARACTERISTICS |
| Competency Cluster | Connections |
| Overarching Idea | Space and shape |
| Context | Societal |
| Item Format | Simple multiple choice |
| Cognitive process | Interpreting , problem solving. |
| Proficiency level | 2 |

**Credit Pattern:**

Full Credit:2 Partial Credit: 1 No Credit: 0

**Description of Answer Key and Credits:**

|  |
| --- |
| 11.2 Full credit ( a)(8x + 6) mNo credit Other responses and missing |

Name of the Teacher/Item Writer: JayashreeAgasti

Designation: TGT Mathematics

Email: jayuagasti@gmail.com

Phone No.:9926412336

Name of the Vidyalaya: K. V. Mhow

KVS Region: Bhopal

**TEST ITEM 11.3GRASSLAND WITH A FLOWERBED**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- QUADRATIC EQUATIONS | CLASS :- X  EXPECTED TIME :- 4 MIN  TOTAL CREDIT :- 2 |
| DESCRIPTION OF ITEM  TEXT AND IMAGE | LEARNING OUTCOMES :- | To make the students aware of the properties of rectangle and solve quadratic equation. |

**MATHEMATICAL LITERACY**

|  |  |
| --- | --- |
| FRAMEWORK | CHARACTERISTICS |
| Competency Cluster | Connections |
| Overarching Idea | Space and shape |
| Context | Societal |
| Item Format | 11.3 Closed constructed response |
| Cognitive process | Interpreting , problem solving. |
| Proficiency level | 3 |

**Credit Pattern:**

Full Credit:2 Partial Credit: 1 No Credit: 0

**Description of Answer Key and Credits:**

|  |
| --- |
| 11.3 Full credit   x = 20 m.Partial credit If equation is correct but solution is wrong  No credit Other responses and missing |

Name of the Teacher/Item Writer: JayashreeAgasti

Designation: TGT Mathematics

Email: jayuagasti@gmail.com

Phone No.:9926412336

Name of the Vidyalaya: K. V. Mhow

KVS Region: Bhopal

**TEST ITEM 11.4GRASSLAND WITH A FLOWERBED**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- QUADRATIC EQUATIONS | CLASS :- X  EXPECTED TIME :- 4 MIN  TOTAL CREDIT :- 2 |
| DESCRIPTION OF ITEM  TEXT AND IMAGE | LEARNING OUTCOMES :- | To make the students aware of the properties of rectangle and solve quadratic equation. |

**MATHEMATICAL LITERACY**

|  |  |
| --- | --- |
| FRAMEWORK | CHARACTERISTICS |
| Competency Cluster | Connections |
| Overarching Idea | Space and shape |
| Context | Societal |
| Item Format | Closed constructed response |
| Cognitive process | Interpreting , problem solving. |
| Proficiency level | 3 |

**Credit Pattern:**

Full Credit:2 Partial Credit: 1 No Credit: 0

**Description of Answer Key and Credits:**

|  |
| --- |
| 11.4 Full credit Area of grassland =860 m2. And that of the flowerbed = 400 m2.  Partial credit if any one area is correct.  No credit Other responses and missing |

Name of the Teacher/Item Writer: JayashreeAgasti

Designation: TGT Mathematics

Email: jayuagasti@gmail.com

Phone No.:9926412336

Name of the Vidyalaya: K. V. Mhow

KVS Region: Bhopal

**TEST ITEM 11.5GRASSLAND WITH A FLOWERBED**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- QUADRATIC EQUATIONS | CLASS :- X  EXPECTED TIME :- 4 MIN  TOTAL CREDIT :- 2 |
| DESCRIPTION OF ITEM  TEXT AND IMAGE | LEARNING OUTCOMES :- | To make the students aware of the properties of rectangle and solve quadratic equation. |

**MATHEMATICAL LITERACY**

|  |  |
| --- | --- |
| FRAMEWORK | CHARACTERISTICS |
| Competency Cluster | Connections |
| Overarching Idea | Space and shape |
| Context | Societal |
| Item Format | Closed constructed response |
| Cognitive process | Interpreting , problem solving. |
| Proficiency level | 3 |

**Credit Pattern:**

Full Credit:2 Partial Credit: 1 No Credit: 0

**Description of Answer Key and Credits:**

|  |
| --- |
| 11.5 Full credit 43:20  No credit Other responses and missing |

Name of the Teacher/Item Writer: JayashreeAgasti

Designation: TGT Mathematics

Email: jayuagasti@gmail.com

Phone No.:9926412336

Name of the Vidyalaya: K. V. Mhow

KVS Region: Bhopal

**TEST ITEM 12.1THROWING A BALL**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- QUADRATIC EQUATIONS | CLASS :- X  EXPECTED TIME :- 4 MIN  TOTAL CREDIT :- 2 |
| DESCRIPTION OF ITEM  TEXT AND GRAPH | LEARNING OUTCOMES :- | To make the students aware of the properties of Physics and solve quadratic equation. |

.

**MATHEMATICAL LITERACY**

|  |  |
| --- | --- |
| FRAMEWORK | CHARACTERISTICS |
| Competency Cluster | Reflection |
| Overarching Idea | Change and relationship |
| Context | Scientific |
| Item Format | Simple multiple choice |
| Cognitive process | Interpreting , problem solving. |
| Proficiency level | 2 |

**Credit Pattern:**

Full Credit:2Partial Credit: 1Nil Credit: 0

**Description of Answer Key and Credits:**

|  |
| --- |
| ANSWERS 12.1 Full credit ( c) 3m  No credit Other responses and missing |

Name of the Teacher/Item Writer: JayashreeAgasti

Designation: TGT Mathematics

Email: [jayuagasti@gmail.com](mailto:jayuagasti@gmail.com)

Phone No.:9926412336

Name of the Vidyalaya: K. V. Mhow

KVS Region: Bhopal

**TEST ITEM 12.2THROWING A BALL**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- QUADRATIC EQUATIONS | CLASS :- X  EXPECTED TIME :- 4 MIN  TOTAL CREDIT :- 2 |
| DESCRIPTION OF ITEM  TEXT AND GRAPH | LEARNING OUTCOMES :- | To make the students aware of the properties of Physics and solve quadratic equation. |

.

**MATHEMATICAL LITERACY**

|  |  |
| --- | --- |
| FRAMEWORK | CHARACTERISTICS |
| Competency Cluster | Reflection |
| Overarching Idea | Change and relationship |
| Context | Scientific |
| Item Format | 12. 2 Complex multiple choice |
| Cognitive process | Interpreting , problem solving. |
| Proficiency level | 2 |

**Credit Pattern:**

Full Credit: 2 Partial Credit: 1 Nil Credit: 0

**Description of Answer Key and Credits:**

|  |
| --- |
| 12.2 Full credit ( d) 0 m  No credit Other responses and missing |

Name of the Teacher/Item Writer: JayashreeAgasti

Designation: TGT Mathematics

Email: jayuagasti@gmail.com

Phone No.:9926412336

Name of the Vidyalaya: K. V. Mhow

KVS Region: Bhopal

**TEST ITEM 12.3THROWING A BALL**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- QUADRATIC EQUATIONS | CLASS :- X  EXPECTED TIME :- 4MIN  TOTAL CREDIT :- 2 |
| DESCRIPTION OF ITEM  TEXT AND GRAPH | LEARNING OUTCOMES :- | To make the students aware of the properties of Physics and solve quadratic equation. |

.

**MATHEMATICAL LITERACY**

|  |  |
| --- | --- |
| FRAMEWORK | CHARACTERISTICS |
| Competency Cluster | Reflection |
| Overarching Idea | Change and relationship |
| Context | Scientific |
| Item Format | Closed constructed response |
| Cognitive process | Interpreting , problem solving. |
| Proficiency level | 4 |

**Credit Pattern:**

Full Credit: 2 Partial Credit: 1 Nil Credit: 0

**Description of Answer Key and Credits:**

|  |
| --- |
| 12.3 Full credit  t = −0.2  or  t = 3  Partial credit while solving if some steps are correct.  No credit Other responses and missing |

Name of the Teacher/Item Writer: JayashreeAgasti

Designation: TGT Mathematics

Email: [jayuagasti@gmail.com](mailto:jayuagasti@gmail.com)

Phone No.:9926412336

Name of the Vidyalaya: K. V. Mhow

KVS Region: Bhopal

**TEST ITEM 12.4THROWING A BALL**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- QUADRATIC EQUATIONS | CLASS :- X  EXPECTED TIME :- 4MIN  TOTAL CREDIT :- 2 |
| DESCRIPTION OF ITEM  TEXT AND GRAPH | LEARNING OUTCOMES :- | To make the students aware of the properties of Physics and solve quadratic equation. |

.

**MATHEMATICAL LITERACY**

|  |  |
| --- | --- |
| FRAMEWORK | CHARACTERISTICS |
| Competency Cluster | Reflection |
| Overarching Idea | Change and relationship |
| Context | Scientific |
| Item Format | 12.4 Open constructed response |
| Cognitive process | Interpreting , problem solving. |
| Proficiency level | 3 |

**Credit Pattern:**

Full Credit: 2 Partial Credit: 1 Nil Credit: 0

**Description of Answer Key and Credits:**

|  |
| --- |
| 12.4The "t = −0.2" is a negative time, impossible in our case.  No credit Other responses and missing |

Name of the Teacher/Item Writer: JayashreeAgasti

Designation: TGT Mathematics

Email: [jayuagasti@gmail.com](mailto:jayuagasti@gmail.com)

Phone No.:9926412336

Name of the Vidyalaya: K. V. Mhow

KVS Region: Bhopal

**TEST ITEM 12.5THROWING A BALL**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- QUADRATIC EQUATIONS | CLASS :- X  EXPECTED TIME :- 4MIN  TOTAL CREDIT :- 2 |
| DESCRIPTION OF ITEM  TEXT AND GRAPH | LEARNING OUTCOMES :- | To make the students aware of the properties of Physics and solve quadratic equation. |

.**MATHEMATICAL LITERACY**

|  |  |
| --- | --- |
| FRAMEWORK | CHARACTERISTICS |
| Competency Cluster | Reflection |
| Overarching Idea | Change and relationship |
| Context | Scientific |
| Item Format | 12.5 Short response item |
| Cognitive process | Interpreting , problem solving. |
| Proficiency level | 5 |

**Credit Pattern:**

Full Credit: 2 Partial Credit: 1 Nil Credit: 0

**Description of Answer Key and Credits:**

|  |
| --- |
| 12.5 Full credit h = 12.5 to 12.8 m (from graph or calculations )  No credit Other responses and missing |

Name of the Teacher/Item Writer: JayashreeAgasti

Designation: TGT Mathematics

Email: [jayuagasti@gmail.com](mailto:jayuagasti@gmail.com)

Phone No.:9926412336

Name of the Vidyalaya: K. V. Mhow

KVS Region: Bhopal

**TEST ITEM 13.1WINDOW CURTAINS**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- QUADRATIC EQUATIONS | CLASS :- X  EXPECTED TIME :- 4 MIN  TOTAL CREDIT :- 2 |
| DESCRIPTION OF ITEM  TEXT AND IMAGE | LEARNING OUTCOMES :- | To make the students aware of the properties of right triangle and rectangles and solve quadratic equation. |

**MATHEMATICAL LITERACY**

|  |  |
| --- | --- |
| FRAMEWORK | CHARACTERISTICS |
| Competency Cluster | Connections |
| Overarching Idea | Space and shape |
| Context | Personal |
| Item Format | Simple multiple choice |
| Cognitive process | Interpreting, problem solving. |
| Proficiency level | 1 |

**Credit Pattern:**

Full Credit: 2Partial Credit: 1No Credit: 0

**Description of Answer Key and Credits:**

|  |
| --- |
| ANSWERS 13.1 Full credit ( c) isosceles triangleNo credit Other responses and missing |

Name of the Teacher/Item Writer: JayashreeAgasti

Designation: TGT Mathematics

Email: jayuagasti@gmail.com

Phone No.:9926412336

Name of the Vidyalaya: K. V. Mhow

KVS Region: Bhopal

**TEST ITEM 13.2WINDOW CURTAINS**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- QUADRATIC EQUATIONS | CLASS :- X  EXPECTED TIME :- 4 MIN  TOTAL CREDIT :- 2 |
| DESCRIPTION OF ITEM  TEXT AND IMAGE | LEARNING OUTCOMES :- | To make the students aware of the properties of right triangle and rectangles and solve quadratic equation. |

**MATHEMATICAL LITERACY**

|  |  |
| --- | --- |
| FRAMEWORK | CHARACTERISTICS |
| Competency Cluster | Connections |
| Overarching Idea | Space and shape |
| Context | Personal |
| Item Format | Simple multiple choice |
| Cognitive process | Interpreting, problem solving. |
| Proficiency level | 2 |

**Credit Pattern:**

Full Credit: 2 Partial Credit: 1 No Credit: 0

**Description of Answer Key and Credits:**

|  |
| --- |
| 13.2 Full credit ( a) 1 : 3No credit Other responses and missing |

Name of the Teacher/Item Writer: JayashreeAgasti

Designation: TGT Mathematics

Email: jayuagasti@gmail.com

Phone No.:9926412336

Name of the Vidyalaya: K. V. Mhow

KVS Region: Bhopal

**TEST ITEM 13.3WINDOW CURTAINS**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- QUADRATIC EQUATIONS | CLASS :- X  EXPECTED TIME :- 4 MIN  TOTAL CREDIT :- 2 |
| DESCRIPTION OF ITEM  TEXT AND IMAGE | LEARNING OUTCOMES :- | To make the students aware of the properties of right triangle and rectangles and solve quadratic equation. |

**MATHEMATICAL LITERACY**

|  |  |
| --- | --- |
| FRAMEWORK | CHARACTERISTICS |
| Competency Cluster | Connections |
| Overarching Idea | Space and shape |
| Context | Personal |
| Item Format | * 1. Closed constructed respons |
| Cognitive process | Interpreting, problem solving. |
| Proficiency level | 4 |

**Credit Pattern:**

Full Credit: 2 Partial Credit: 1 No Credit: 0

**Description of Answer Key and Credits:**

|  |
| --- |
| 13.3 Full credit length = 24 inches, breadth = 36 inches.  Partial credit formation of quadratic equationNo credit Other responses and missing |

Name of the Teacher/Item Writer: JayashreeAgasti

Designation: TGT Mathematics

Email: jayuagasti@gmail.com

Phone No.:9926412336

Name of the Vidyalaya: K. V. Mhow

KVS Region: Bhopal

**TEST ITEM 13.4WINDOW CURTAINS**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- QUADRATIC EQUATIONS | CLASS :- X  EXPECTED TIME :- 4 MIN  TOTAL CREDIT :- 2 |
| DESCRIPTION OF ITEM  TEXT AND IMAGE | LEARNING OUTCOMES :- | To make the students aware of the properties of right triangle and rectangles and solve quadratic equation. |

**MATHEMATICAL LITERACY**

|  |  |
| --- | --- |
| FRAMEWORK | CHARACTERISTICS |
| Competency Cluster | Connections |
| Overarching Idea | Space and shape |
| Context | Personal |
| Item Format | 13.4 Closed constructed response |
| Cognitive process | Interpreting, problem solving. |
| Proficiency level | 2 |

**Credit Pattern:**

Full Credit: 2 Partial Credit: 1 No Credit: 0

**Description of Answer Key and Credits:**

|  |
| --- |
| 13.4 Full credit 432 square inchesNo credit Other responses and missing |

Name of the Teacher/Item Writer: JayashreeAgasti

Designation: TGT Mathematics

Email: jayuagasti@gmail.com

Phone No.:9926412336

Name of the Vidyalaya: K. V. Mhow

KVS Region: Bhopal

**TEST ITEM 13.5WINDOW CURTAINS**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- QUADRATIC EQUATIONS | CLASS :- X  EXPECTED TIME :- 4 MIN  TOTAL CREDIT :- 2 |
| DESCRIPTION OF ITEM  TEXT AND IMAGE | LEARNING OUTCOMES :- | To make the students aware of the properties of right triangle and rectangles and solve quadratic equation. |

**MATHEMATICAL LITERACY**

|  |  |
| --- | --- |
| FRAMEWORK | CHARACTERISTICS |
| Competency Cluster | Connections |
| Overarching Idea | Space and shape |
| Context | Personal |
| Item Format | closed constructed response |
| Cognitive process | Interpreting, problem solving. |
| Proficiency level | 4 |

**Credit Pattern:**

Full Credit: 2 Partial Credit: 1 No Credit: 0

**Description of Answer Key and Credits:**

|  |
| --- |
| 13.5 Full credit 120 inches. No credit Other responses and missing |

Name of the Teacher/Item Writer: JayashreeAgasti

Designation: TGT Mathematics

Email: jayuagasti@gmail.com

Phone No.:9926412336

Name of the Vidyalaya: K. V. Mhow

KVS Region: Bhopal

**TEST ITEM 14.1A TRIP BY MOTOR BOAT**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- QUADRATIC EQUATIONS | CLASS :- X  EXPECTED TIME :- 5 MIN  TOTAL CREDIT :- 2 |
| DESCRIPTION OF ITEM  TEXT AND IMAGE | LEARNING OUTCOMES :- | To make the students aware of the properties of physics and solve quadratic equation. |

**MATHEMATICAL LITERACY**

|  |  |
| --- | --- |
| FRAMEWORK | CHARACTERISTICS |
| Competency Cluster | Reflections |
| Overarching Idea | Change and relationship |
| Context | Societal |
| Item Format | 14.1Complex multiple choice |
| Cognitive process | Interpreting , problem solving. |
| Proficiency level | 3 |

**Credit Pattern:**

Full Credit: 2Partial Credit: 1No Credit: 0

**Description of Answer Key and Credits:**

|  |
| --- |
| ANSWERS 14.1 Full credit ( c) ( 20 – x ) km/hr  No credit Other responses and missing |

Name of the Teacher/Item Writer: JayashreeAgasti

Designation: TGT Mathematics

Email: jayuagasti@gmail.com

Phone No.:9926412336

Name of the Vidyalaya: K. V. Mhow

KVS Region: Bhopal

**TEST ITEM 14.2A TRIP BY MOTOR BOAT**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- QUADRATIC EQUATIONS | CLASS :- X  EXPECTED TIME :- 5 MIN  TOTAL CREDIT :- 2 |
| DESCRIPTION OF ITEM  TEXT AND IMAGE | LEARNING OUTCOMES :- | To make the students aware of the properties of physics and solve quadratic equation. |

**MATHEMATICAL LITERACY**

|  |  |
| --- | --- |
| FRAMEWORK | CHARACTERISTICS |
| Competency Cluster | Reflections |
| Overarching Idea | Change and relationship |
| Context | Societal |
| Item Format | 14.2 Complex multiple choice |
| Cognitive process | Interpreting , problem solving. |
| Proficiency level | 2 |

**Credit Pattern:**

Full Credit: 2 Partial Credit: 1 No Credit: 0

**Description of Answer Key and Credits:**

|  |
| --- |
| 14.2 Full credit Option a) No credit Other responses and missing |

Name of the Teacher/Item Writer: JayashreeAgasti

Designation: TGT Mathematics

Email: jayuagasti@gmail.com

Phone No.:9926412336

Name of the Vidyalaya: K. V. Mhow

KVS Region: Bhopal

**TEST ITEM 14.3A TRIP BY MOTOR BOAT**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- QUADRATIC EQUATIONS | CLASS :- X  EXPECTED TIME :- 5 MIN  TOTAL CREDIT :- 2 |
| DESCRIPTION OF ITEM  TEXT AND IMAGE | LEARNING OUTCOMES :- | To make the students aware of the properties of physics and solve quadratic equation. |

**MATHEMATICAL LITERACY**

|  |  |
| --- | --- |
| FRAMEWORK | CHARACTERISTICS |
| Competency Cluster | Reflections |
| Overarching Idea | Change and relationship |
| Context | scientific |
| Item Format | 14.3 Closed constructed response |
| Cognitive process | Interpreting , problem solving. |
| Proficiency level | 4 |

**Credit Pattern:**

Full Credit: 2Partial Credit: 1No Credit: 0

**Description of Answer Key and Credits:**

|  |
| --- |
| 14.3 Full credit x2 + 30 x – 400 = 0 x = - 40, x = 10  Partial credit for some correct steps  No credit Other responses and missing |

Name of the Teacher/Item Writer: JayashreeAgasti

Designation: TGT Mathematics

Email: jayuagasti@gmail.com

Phone No.:9926412336

Name of the Vidyalaya: K. V. Mhow

KVS Region: Bhopal

**TEST ITEM 14.4A TRIP BY MOTOR BOAT**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- QUADRATIC EQUATIONS | CLASS :- X  EXPECTED TIME :- 5 MIN  TOTAL CREDIT :- 2 |
| DESCRIPTION OF ITEM  TEXT AND IMAGE | LEARNING OUTCOMES :- | To make the students aware of the properties of physics and solve quadratic equation. |

**MATHEMATICAL LITERACY**

|  |  |
| --- | --- |
| FRAMEWORK | CHARACTERISTICS |
| Competency Cluster | Reflections |
| Overarching Idea | Change and relationship |
| Context | Scientific |
| Item Format | 14.4Closed constructed response |
| Cognitive process | Interpreting , problem solving. |
| Proficiency level | 3 |

**Credit Pattern:**

Full Credit: 2

Partial Credit: 1

No Credit: 0

**Description of Answer Key and Credits:**

|  |
| --- |
| 14.4 Full credit speed can’t be negative.  No credit Other responses and missing |

Name of the Teacher/Item Writer: JayashreeAgasti

Designation: TGT Mathematics

Email: jayuagasti@gmail.com

Phone No.:9926412336

Name of the Vidyalaya: K. V. Mhow

KVS Region: Bhopal

**TEST ITEM 15.1 A PICNIC BY TWO CARS**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- QUADRATIC EQUATIONS | CLASS :- X  EXPECTED TIME :- 6 MIN  TOTAL CREDIT :- 2 |
| DESCRIPTION OF ITEM  TEXT AND IMAGE | LEARNING OUTCOMES :- | To make the students aware of the properties of quadratic equations and solve quadratic equation. |

**MATHEMATICAL LITERACY**

|  |  |
| --- | --- |
| FRAMEWORK | CHARACTERISTICS |
| Competency Cluster | Connections |
| Overarching Idea | Change and relationship |
| Context | Societal |
| Item Format | Simple multiple choice |
| Cognitive process | Interpreting, problem solving. |
| Proficiency level | 2 |

**Credit Pattern:**

Full Credit:2 Partial Credit: 1 No Credit: 0

**Description of Answer Key and Credits:**

|  |
| --- |
| ANSWERS15.1 Full credit ( a) x+ 5 km  No credit Other responses and missing |

Name of the Teacher/Item Writer: Mr. C . L. Joshi

Designation: PGT Mathematics

Email: cljoshipin@gmail.com

Phone No.:9826985232

Name of the Vidyalaya: K. V. No. 2 Indore

KVS Region: Bhopal

**TEST ITEM 15.2 A PICNIC BY TWO CARS**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- QUADRATIC EQUATIONS | CLASS :- X  EXPECTED TIME :- 6 MIN  TOTAL CREDIT :- 2 |
| DESCRIPTION OF ITEM  TEXT AND IMAGE | LEARNING OUTCOMES :- | To make the students aware of the properties of quadratic equations and solve quadratic equation. |

**MATHEMATICAL LITERACY**

|  |  |
| --- | --- |
| FRAMEWORK | CHARACTERISTICS |
| Competency Cluster | Connections |
| Overarching Idea | Change and relationship |
| Context | Societal |
| Item Format | 15.2 Closed constructed response |
| Cognitive process | Interpreting, problem solving. |
| Proficiency level | 3 |

**Credit Pattern:**

Full Credit:2 Partial Credit: 1 No Credit: 0

**Description of Answer Key and Credits:**

|  |
| --- |
| ANSWERS  15.2 Full credit   x2 + 5x -500 =0    x = 20 , x = - 25  Partial credit if values is correct but solution is wrong  No credit Other responses and missing |

Name of the Teacher/Item Writer: Mr. C . L. Joshi

Designation: PGT Mathematics

Email: cljoshipin@gmail.com

Phone No.:9826985232

Name of the Vidyalaya: K. V. No. 2 Indore

KVS Region: Bhopal

**TEST ITEM 15.3 A PICNIC BY TWO CARS**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- QUADRATIC EQUATIONS | CLASS :- X  EXPECTED TIME :- 6 MIN  TOTAL CREDIT :- 2 |
| DESCRIPTION OF ITEM  TEXT AND IMAGE | LEARNING OUTCOMES :- | To make the students aware of the properties of quadratic equations and solve quadratic equation. |

**MATHEMATICAL LITERACY**

|  |  |
| --- | --- |
| FRAMEWORK | CHARACTERISTICS |
| Competency Cluster | Connections |
| Overarching Idea | Change and relationship |
| Context | Societal |
| Item Format | 15.3 Closed constructed response |
| Cognitive process | Interpreting, problem solving. |
| Proficiency level | 4 |

**Credit Pattern:**

Full Credit:2 Partial Credit: 1 No Credit: 0

**Description of Answer Key and Credits:**

|  |
| --- |
| ANSWERS  15.3 Full credit yes , D>0 real and distinct roots  Partial credit If yes, but without reason  No credit Other responses and missing |

Name of the Teacher/Item Writer: Mr. C . L. Joshi

Designation: PGT Mathematics

Email: cljoshipin@gmail.com

Phone No.:9826985232

Name of the Vidyalaya: K. V. No. 2 Indore

KVS Region: Bhopal

**TEST ITEM 16.1 COMBAT OF BHEESHM & ARJUN**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- QUADRATIC EQUATIONS | CLASS :- X  EXPECTED TIME :- 5 MIN  TOTAL CREDIT :- 2 |
| DESCRIPTION OF ITEM  TEXT AND IMAGE | LEARNING OUTCOMES :- | To make the students aware of the properties of quadratic equations and solve quadratic equation. |

**MATHEMATICAL LITERACY**

|  |  |
| --- | --- |
| FRAMEWORK | CHARACTERISTICS |
| Competency Cluster | Connections |
| Overarching Idea | Change and relationship |
| Context | Societal |
| Item Format | 16.1Closed constructed response |
| Cognitive process | Interpreting, problem solving. |
| Proficiency level | 2 |

**Credit Pattern:**

**Full Credit: 2 Partial Credits: 1No Credit: 0**

**Description of Answer Key and Credits:**

|  |
| --- |
| ANSWERS 16.1 Full credit ( a) x/2 Arrows  No credit Other responses and missing |

Name of the Teacher/Item Writer: Mr. C . L. Joshi

Designation: PGT Mathematics

Email: cljoshipin@gmail.com

Phone No.:9826985232

Name of the Vidyalaya: K. V. No. 2 Indore

KVS Region: Bhopal

**TEST ITEM 16.2 COMBAT OF BHEESHM & ARJUN**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- QUADRATIC EQUATIONS | CLASS :- X  EXPECTED TIME :- 5 MIN  TOTAL CREDIT :- 2 |
| DESCRIPTION OF ITEM  TEXT AND IMAGE | LEARNING OUTCOMES :- | To make the students aware of the properties of quadratic equations and solve quadratic equation. |

**MATHEMATICAL LITERACY**

|  |  |
| --- | --- |
| FRAMEWORK | CHARACTERSTICS |
| Competency Cluster | Connections |
| Overarching Idea | Change and relationship |
| Context | Societal |
| Item Format | 16.2 Closed constructed response |
| Cognitive process | Interpreting, problem solving. |
| Proficiency level | 2 |

**Credit Pattern:**

**Full Credit: 2 Partial Credits: 1No Credit: 0**

**Description of Answer Key and Credits:**

|  |
| --- |
| Full credit16. 24√x+1 Arrows  No credit Other responses and missing |

Name of the Teacher/Item Writer: Mr. C . L. Joshi

Designation: PGT Mathematics

Email: cljoshipin@gmail.com

Phone No.:9826985232

Name of the Vidyalaya: K. V. No. 2 Indore

KVS Region: Bhopal

**TEST ITEM 16.3 COMBAT OF BHEESHM & ARJUN**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- QUADRATIC EQUATIONS | CLASS :- X  EXPECTED TIME :- 5 MIN  TOTAL CREDIT :- 2 |
| DESCRIPTION OF ITEM  TEXT AND IMAGE | LEARNING OUTCOMES :- | To make the students aware of the properties of quadratic equations and solve quadratic equation. |

**MATHEMATICAL LITERACY**

|  |  |
| --- | --- |
| FRAMEWORK | CHARACTERISTICS |
| Competency Cluster | Connections |
| Overarching Idea | Change and relationship |
| Context | Societal |
| Item Format | 16.3 Closed constructed response |
| Cognitive process | Interpreting, problem solving. |
| Proficiency level | 4 |

**Credit Pattern:**

**Full Credit: 2 Partial Credits: 1No Credit: 0**

**Description of Answer Key and Credits:**

|  |
| --- |
| 16.3. Full credit    x/2+6+3+4√x+1=x             ⇒ x +20 +8√x= 2x             x-8√x-20=0  ( Let x=y2) Y2 -8y-20=0     y = 10 , y = -2  Partial credit if values is correct but solution is wrong  No credit Other responses and missing |

Name of the Teacher/Item Writer: Mr. C . L. Joshi

Designation: PGT Mathematics

Email: cljoshipin@gmail.com

Phone No.:9826985232

Name of the Vidyalaya: K. V. No. 2 Indore

KVS Region: Bhopal

**TEST ITEM 16.4 COMBAT OF BHEESHM & ARJUN**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- QUADRATIC EQUATIONS | CLASS :- X  EXPECTED TIME :- 5 MIN  TOTAL CREDIT :- 2 |
| DESCRIPTION OF ITEM  TEXT AND IMAGE | LEARNING OUTCOMES :- | To make the students aware of the properties of quadratic equations and solve quadratic equation. |

**MATHEMATICAL LITERACY**

|  |  |
| --- | --- |
| FRAMEWORK | CHARACTERISTICS |
| Competency Cluster | Connections |
| Overarching Idea | Change and relationship |
| Context | Societal |
| Item Format | * 1. Closed constructed response |
| Cognitive process | Interpreting, problem solving. |
| Proficiency level | 3 |

**Credit Pattern:**

**Full Credit: 2 Partial Credits: 1No Credit: 0**

**Description of Answer Key and Credits:**

|  |
| --- |
| 16.4 Full credit ,x=100  No credit other responses and missing. |

Name of the Teacher/Item Writer: Mr. C . L. Joshi

Designation: PGT Mathematics

Email: cljoshipin@gmail.com

Phone No.:9826985232

Name of the Vidyalaya: K. V. No. 2 Indore

KVS Region: Bhopal

**TEST ITEM 17.1 PEACOCK V/S SNAKE**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- QUADRATIC EQUATIONS | CLASS :- X  EXPECTED TIME :- 5 MIN  TOTAL CREDIT :- 2 |
| DESCRIPTION OF ITEM  TEXT AND IMAGE | LEARNING OUTCOMES :- | To make the students aware of the properties of quadratic equations and solve quadratic equation. |

**MATHEMATICAL LITERACY**

|  |  |
| --- | --- |
| FRAMEWORK | CHARACTERISTICS |
| Competency Cluster | Connections |
| Overarching Idea | Change and relationship |
| Context | Personal |
| Item Format | Simple multiple choice |
| Cognitive process | Employing, problem solving. |
| Proficiency level | 1 |

**Credit Pattern**:

Full Credit: 2Partial Credit: 1No Credit: 0

**Description of Answer Key and Credits:**

|  |
| --- |
| ANSWERS 17.1 Full credit ( b )  No credit Other responses and missing |

Name of the Teacher/Item Writer: Mr. C . L. Joshi

Designation: PGT Mathematics

Email: cljoshipin@gmail.com

Phone No.:9826985232

Name of the Vidyalaya: K. V. No. 2 Indore

KVS Region: Bhopal

**TEST ITEM 17.2 PEACOCK V/S SNAKE**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- QUADRATIC EQUATIONS | CLASS :- X  EXPECTED TIME :- 5 MIN  TOTAL CREDIT :- 2 |
| DESCRIPTION OF ITEM  TEXT AND IMAGE | LEARNING OUTCOMES :- | To make the students aware of the properties of quadratic equations and solve quadratic equation. |

**MATHEMATICAL LITERACY**

|  |  |
| --- | --- |
| FRAMEWORK | CHARACTERSTICS |
| Competency Cluster | Connections |
| Overarching Idea | Change and relationship |
| Context | Personal |
| Item Format | * 1. Closed constructed response |
| Cognitive process | Interpreting, problem solving. |
| Proficiency level | 2 |

**Credit Pattern**:

Full Credit: 2Partial Credit: 1No Credit: 0

**Description of Answer Key and Credits:**

|  |
| --- |
| 17.2 Full credit ( a) (27-x )m  No credit Other responses and missing |

Name of the Teacher/Item Writer: Mr. C . L. Joshi

Designation: PGT Mathematics

Email: cljoshipin@gmail.com

Phone No.:9826985232

Name of the Vidyalaya: K. V. No. 2 Indore

KVS Region: Bhopal

**TEST ITEM 17.3 PEACOCK V/S SNAKE**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- QUADRATIC EQUATIONS | CLASS :- X  EXPECTED TIME :-5 MIN  TOTAL CREDIT :- 2 |
| DESCRIPTION OF ITEM  TEXT AND IMAGE | LEARNING OUTCOMES :- | To make the students aware of the properties of quadratic equations and solve quadratic equation. |

**MATHEMATICAL LITERACY**

|  |  |
| --- | --- |
| FRAMEWORK | CHARACTERISTICS |
| Competency Cluster | Connections |
| Overarching Idea | Change and relationship |
| Context | Personal |
| Item Format | * 1. Closed constructed response |
| Cognitive process | Interpreting, problem solving. |
| Proficiency level | 4 |

**Credit Pattern**:

Full Credit: 2Partial Credit: 1No Credit: 0

**Description of Answer Key and Credits:**

|  |
| --- |
| 17.3 Let distance decided by peacock = x  snake will be at as distance of 27-x peacock distance would be equal to  x2 =92 +(27-x)2  distance covered by both = 15 m  Partial credit if values is correct but solution is wrong  No credit Other responses and missing |

Name of the Teacher/Item Writer: Mr. C . L. Joshi

Designation: PGT Mathematics

Email: cljoshipin@gmail.com

Phone No.:9826985232

Name of the Vidyalaya: K. V. No. 2 Indore

KVS Region: Bhopal

**TEST ITEM 17.4 PEACOCK V/S SNAKE**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- QUADRATIC EQUATIONS | CLASS :- X  EXPECTED TIME :- 5 MIN  TOTAL CREDIT :- 2 |
| DESCRIPTION OF ITEM  TEXT AND IMAGE | LEARNING OUTCOMES :- | To make the students aware of the properties of quadratic equations and solve quadratic equation. |

**MATHEMATICAL LITERACY**

|  |  |
| --- | --- |
| FRAMEWORK | CHARACTERISTICS |
| Competency Cluster | Connections |
| Overarching Idea | Change and relationship |
| Context | Personal |
| Item Format | Closed constructed response |
| Cognitive process | Interpreting, problem solving. |
| Proficiency level | 3 |

**Credit Pattern**:

Full Credit: 2Partial Credit: 1No Credit: 0

**Description of Answer Key and Credits:**

|  |
| --- |
| distance from hole =( 27-15) m = 12m  No credit Other responses and missing |

Name of the Teacher/Item Writer: Mr. C . L. Joshi

Designation: PGT Mathematics

Email: cljoshipin@gmail.com

Phone No.:9826985232

Name of the Vidyalaya: K. V. No. 2 Indore

KVS Region: Bhopal

**TEST ITEM 18.1RECTANGULAR POND**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- QUADRATIC EQUATIONS | CLASS :- X  EXPECTED TIME :- 5 MIN  TOTAL CREDIT :- 2 |
| DESCRIPTION OF ITEM  TEXT AND IMAGE | LEARNING OUTCOMES :- | To make the students aware of the properties of quadratic equations and solve quadratic equation. |

**MATHEMATICAL LITERACY**

|  |  |
| --- | --- |
| FRAMEWORK | CHARACTERISTICS |
| Competency Cluster | Connections |
| Overarching Idea | Change and relationship |
| Context | Societal |
| Item Format | * 1. Simple multiple choice |
| Cognitive process | Interpreting, problem solving. |
| Proficiency level | 2 |

**Credit Pattern:**

Full Credit:2 Partial Credit: 1 No Credit: 0

**Description of Answer Key and Credits:**

|  |
| --- |
| ANSWERS 18.1 Full credit ( c )  No credit Other responses and missing |

Name of the Teacher/Item Writer: Mr. C . L. Joshi

Designation: PGT Mathematics

Email: cljoshipin@gmail.com

Phone No.:9826985232

Name of the Vidyalaya: K. V. No. 2 Indore

KVS Region: Bhopal

**TEST ITEM 18.2RECTANGULAR POND**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- QUADRATIC EQUATIONS | CLASS :- X  EXPECTED TIME :- 5 MIN  TOTAL CREDIT :- 2 |
| DESCRIPTION OF ITEM  TEXT AND IMAGE | LEARNING OUTCOMES :- | To make the students aware of the properties of quadratic equations and solve quadratic equation. |

**MATHEMATICAL LITERACY**

|  |  |
| --- | --- |
| FRAMEWORK | CHARACTERISTICS |
| Competency Cluster | Connections |
| Overarching Idea | Change and relationship |
| Context | Societal |
| Item Format | * 1. Closed constructed response |
| Cognitive process | Interpreting, problem solving. |
| Proficiency level | 2 |

**Credit Pattern:**

Full Credit:2 Partial Credit: 1 No Credit: 0

**Description of Answer Key and Credits:**

|  |
| --- |
| 18.2 Full credit length =(50-2x)m,breadth = (40-2x) m  No credit Other responses and missing |

Name of the Teacher/Item Writer: Mr. C . L. Joshi

Designation: PGT Mathematics

Email: cljoshipin@gmail.com

Phone No.:9826985232

Name of the Vidyalaya: K. V. No. 2 Indore

KVS Region: Bhopal

**TEST ITEM 18.3RECTANGULAR POND**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- QUADRATIC EQUATIONS | CLASS :- X  EXPECTED TIME :- 5 MIN  TOTAL CREDIT :- 2 |
| DESCRIPTION OF ITEM  TEXT AND IMAGE | LEARNING OUTCOMES :- | To make the students aware of the properties of quadratic equations and solve quadratic equation. |

**MATHEMATICAL LITERACY**

|  |  |
| --- | --- |
| FRAMEWORK | CHARACTERISTICS |
| Competency Cluster | Connections |
| Overarching Idea | Change and relationship |
| Context | Societal |
| Item Format | * 1. Closed constructed response |
| Cognitive process | Interpreting, problem solving. |
| Proficiency level | 4 |

**Credit Pattern:**

Full Credit:2 Partial Credit: 1 No Credit: 0

**Description of Answer Key and Credits:**

|  |
| --- |
| 1. Let the width of the grass strip be 'x'   (50-2x)(40-2x) = 816  ⇒x²-45x+296 = 0  ⇒x=37, x=8  But x=37 is not possible  ∴ Width of the grass strip = 8m  Partial credit if values is correct but solution is wrong  No credit Other responses and missing |

Name of the Teacher/Item Writer: Mr. C . L. Joshi

Designation: PGT Mathematics

Email: cljoshipin@gmail.com

Phone No.:9826985232

Name of the Vidyalaya: K. V. No. 2 Indore

KVS Region: Bhopal

**TEST ITEM 18.4RECTANGULAR POND**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- QUADRATIC EQUATIONS | CLASS :- X  EXPECTED TIME :- 5 MIN  TOTAL CREDIT :- 2 |
| DESCRIPTION OF ITEM  TEXT AND IMAGE | LEARNING OUTCOMES :- | To make the students aware of the properties of quadratic equations and solve quadratic equation. |

**MATHEMATICAL LITERACY**

|  |  |
| --- | --- |
| FRAMEWORK | CHARACTERISTICS |
| Competency Cluster | Connections |
| Overarching Idea | Change and relationship |
| Context | Societal |
| Item Format | 18.4 Closed constructed response |
| Cognitive process | Interpreting, problem solving. |
| Proficiency level | 3 |

**Credit Pattern:**

Full Credit:2 Partial Credit: 1 No Credit: 0

**Description of Answer Key and Credits:**

|  |
| --- |
| 18.4Full credit: Length of the pond = (50-16)m = 34m Breadth of the pond = (40-16) m = 24 m  Partial Credit: If any one of them is correct No credit Other responses and missing |

Name of the Teacher/Item Writer: Mr. C . L. Joshi

Designation: PGT Mathematics

Email: cljoshipin@gmail.com

Phone No.:9826985232

Name of the Vidyalaya: K. V. No. 2 Indore

KVS Region: Bhopal

**TEST ITEM 19.1 PICNIC PARTY**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- QUADRATIC EQUATIONS | CLASS :- X  EXPECTED TIME :- 4 MIN  TOTAL CREDIT :- 2 |
| DESCRIPTION OF ITEM  TEXT AND IMAGE | LEARNING OUTCOMES :- | To make the students aware of the properties of quadratic equations and solve quadratic equation. |

**MATHEMATICAL LITERACY**

|  |  |
| --- | --- |
| FRAMEWORK | CHARACTERISTICS |
| Competency Cluster | Connections |
| Overarching Idea | Change and relationship |
| Context | Societal |
| Item Format | * 1. Closed constructed response |
| Cognitive process | Interpreting, problem solving. |
| Proficiency level | 4 |

**Credit Pattern:**

**Full Credit: 2 Partial Credits: 1 No Credit: 0**

**Description of Answer Key and Credits:**

|  |
| --- |
| ANSWERS 19.1 Full credit    x2 - 5x -500 =0    x =- 20 , x = 25  Partial credit if values is correct but solution is wrong  No credit Other responses and missing |

Name of the Teacher/Item Writer: Mr. Binod Kumar

Designation: TGT Mathematics

Email: binodprajpati1981@gmail.com

Phone No.:9340880348

Name of the Vidyalaya: K. V.Sarni

KVS Region: Bhopal

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|  | **TEST ITEM 19.2 PICNIC PARTY**   |  |  |  | | --- | --- | --- | | DOMAIN : - MATHEMATICAL LITERACY | THEME :- QUADRATIC EQUATIONS | CLASS :- X  EXPECTED TIME :- 4 MIN  TOTAL CREDIT :- 2 | | DESCRIPTION OF ITEM  TEXT AND IMAGE | LEARNING OUTCOMES :- | To make the students aware of the properties of quadratic equations and solve quadratic equation. |   **MATHEMATICAL LITERACY**   |  |  | | --- | --- | | FRAMEWORK | CHARACTERISTICS | | Competency Cluster | Connections | | Overarching Idea | Change and relationship | | Context | Societal | | Item Format | * 1. Closed constructed response | | Cognitive process | Interpreting, problem solving. | | Proficiency level | 2 |   **Credit Pattern:**  **Full Credit: 2 Partial Credits: 1 No Credit: 0**  **Description of Answer Key and Credits:**   |  | | --- | | ANSWERS 19.2 Full credit 20 No credit Other responses and missing |   Name of the Teacher/Item Writer: Mr. Binod Kumar  Designation: TGT Mathematics  Email: binodprajpati1981@gmail.com  Phone No.:9340880348  Name of the Vidyalaya: K. V.Sarni  KVS Region: Bhopal  **TEST ITEM 19.3 PICNIC PARTY**   |  |  |  | | --- | --- | --- | | DOMAIN : - MATHEMATICAL LITERACY | THEME :- QUADRATIC EQUATIONS | CLASS :- X  EXPECTED TIME :- 4 MIN  TOTAL CREDIT :- 2 | | DESCRIPTION OF ITEM  TEXT AND IMAGE | LEARNING OUTCOMES :- | To make the students aware of the properties of quadratic equations and solve quadratic equation. |   **MATHEMATICAL LITERACY**   |  |  | | --- | --- | | FRAMEWORK | CHARACTERISTICS | | Competency Cluster | Connections | | Overarching Idea | Change and relationship | | Context | Societal | | Cognitive process | Interpreting, problem solving. | | Proficiency level | 3 |   **Credit Pattern:**  **Full Credit: 2 Partial Credits: 1 No Credit: 0**  **Description of Answer Key and Credits:**   |  | | --- | | ANSWERS 19.3 Full credit 2100 No credit Other responses and missing |   Name of the Teacher/Item Writer: Mr. Binod Kumar  Designation: TGT Mathematics  Email: binodprajpati1981@gmail.com  Phone No.:9340880348  Name of the Vidyalaya: K. V.Sarni  KVS Region: Bhopal  **TEST ITEM 19.4 PICNIC PARTY**   |  |  |  | | --- | --- | --- | | DOMAIN : - MATHEMATICAL LITERACY | THEME :- QUADRATIC EQUATIONS | CLASS :- X  EXPECTED TIME :- 4 MIN  TOTAL CREDIT :- 2 | | DESCRIPTION OF ITEM  TEXT AND IMAGE | LEARNING OUTCOMES :- | To make the students aware of the properties of quadratic equations and solve quadratic equation. |   **MATHEMATICAL LITERACY**   |  |  | | --- | --- | | FRAMEWORK | CHARACTERISTICS | | Competency Cluster | Connections | | Overarching Idea | Change and relationship | | Context | Societal | | Item Format | * 1. Simple multiple choice | | Cognitive process | Interpreting, problem solving. | | Proficiency level | 2 |   **Credit Pattern:**  **Full Credit: 2 Partial Credits: 1 No Credit: 0**  **Description of Answer Key and Credits:**   |  | | --- | | ANSWERS 19.4 Full credit 1000 No credit Other responses and missing |   Name of the Teacher/Item Writer: Mr. Binod Kumar  Designation: TGT Mathematics  Email: binodprajpati1981@gmail.com  Phone No.:9340880348  Name of the Vidyalaya: K. V.Sarni  KVS Region: Bhopal  **TEST ITEM 19.5 PICNIC PARTY**   |  |  |  | | --- | --- | --- | | DOMAIN : - MATHEMATICAL LITERACY | THEME :- QUADRATIC EQUATIONS | CLASS :- X  EXPECTED TIME :- 4 MIN  TOTAL CREDIT :- 2 | | DESCRIPTION OF ITEM  TEXT AND IMAGE | LEARNING OUTCOMES :- | To make the students aware of the properties of quadratic equations and solve quadratic equation. |   **MATHEMATICAL LITERACY**   |  |  | | --- | --- | | FRAMEWORK | CHARACTERISTICS | | Competency Cluster | Connections | | Overarching Idea | Change and relationship | | Context | Societal | | Item Format | * 1. Simple multiple choice | | Cognitive process | Interpreting, problem solving. | | Proficiency level | 3 |   **Credit Pattern:**  **Full Credit: 2 Partial Credits: 1 No Credit: 0**  **Description of Answer Key and Credits:**   |  | | --- | | ANSWERS 19.5 Full credit 100 No credit Other responses and missing |   Name of the Teacher/Item Writer: Mr. Binod Kumar  Designation: TGT Mathematics  Email: binodprajpati1981@gmail.com  Phone No.:9340880348  Name of the Vidyalaya: K. V.Sarni  KVS Region: Bhopal |
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|  | **TEST ITEM 20.1 SEATING ARRANGEMENT IN AUDITORIUM**   |  |  |  | | --- | --- | --- | | DOMAIN : - MATHEMATICAL LITERACY | THEME :- QUADRATIC EQUATIONS | CLASS :- X  EXPECTED TIME :- 5 MIN  TOTAL CREDIT :- 2 | | DESCRIPTION OF ITEM  TEXT AND IMAGE | LEARNING OUTCOMES :- | To make the students aware of the properties of quadratic equations and solve quadratic equation. |   **MATHEMATICAL LITERACY**   |  |  | | --- | --- | | FRAMEWORK | CHARACTERISTICS | | Competency Cluster | Connections | | Overarching Idea | Change and relationship | | Context | Societal | | Item Format | 20.1 Closed constructed response | | Cognitive process | Interpreting, problem solving. | | Proficiency level | 3 |   Credit Pattern:  Full Credit: 2 Partial Credits: 1 No Credit: 0  Description of Answer Key and Credits:   |  | | --- | | ANSWERS 20.1 Full credit  x2-20x-300=0  X=30, -10  Partial credit If quadratic equation is correctly framed without correct answer.  No credit Other responses and missing | |
|  |  |

Name of the Teacher/Item Writer: Mr. Binod Kumar

Designation: TGT Mathematics

Email: binodprajpati1981@gmail.com

Phone No.:9340880348

Name of the Vidyalaya: K. V.Sarni

KVS Region: Bhopal

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|  | **TEST ITEM 20.2 SEATING ARRANGEMENT IN AUDITORIUM**   |  |  |  | | --- | --- | --- | | DOMAIN : - MATHEMATICAL LITERACY | THEME :- QUADRATIC EQUATIONS | CLASS :- X  EXPECTED TIME :- 5 MIN  TOTAL CREDIT :- 2 | | DESCRIPTION OF ITEM  TEXT AND IMAGE | LEARNING OUTCOMES :- | To make the students aware of the properties of quadratic equations and solve quadratic equation. |   **MATHEMATICAL LITERACY**   |  |  | | --- | --- | | FRAMEWORK | CHARACTERISTICS | | Competency Cluster | Connections | | Overarching Idea | Change and relationship | | Context | Societal | | Item Format | 20.2Simple multiple choice | | Cognitive process | Interpreting, problem solving. | | Proficiency level | 2 |   Credit Pattern:  Full Credit: 2 Partial Credits: 1 No Credit: 0  Description of Answer Key and Credits:   |  | | --- | | ANSWERS 20.2 Full credit X=30, -~~10~~ No credit Other responses and missing | |
|  |  |

Name of the Teacher/Item Writer: Mr. Binod Kumar

Designation: TGT Mathematics

Email: binodprajpati1981@gmail.com

Phone No.:9340880348

Name of the Vidyalaya: K. V.Sarni

KVS Region: Bhopal

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|  | **TEST ITEM 20.3 SEATING ARRANGEMENT IN AUDITORIUM**   |  |  |  | | --- | --- | --- | | DOMAIN : - MATHEMATICAL LITERACY | THEME :- QUADRATIC EQUATIONS | CLASS :- X  EXPECTED TIME :- 5 MIN  TOTAL CREDIT :- 2 | | DESCRIPTION OF ITEM  TEXT AND IMAGE | LEARNING OUTCOMES :- | To make the students aware of the properties of quadratic equations and solve quadratic equation. |   **MATHEMATICAL LITERACY**   |  |  | | --- | --- | | FRAMEWORK | CHARACTERISTICS | | Competency Cluster | Connections | | Overarching Idea | Change and relationship | | Context | Societal | | Item Format | Simple multiple choice | | Cognitive process | Interpreting, problem solving. | | Proficiency level | 2 |   Credit Pattern:  Full Credit: 2 Partial Credits: 1 No Credit: 0  Description of Answer Key and Credits:   |  | | --- | | ANSWERS 20.3 Full credit 20 No credit Other responses and missing | |
|  |  |

Name of the Teacher/Item Writer: Mr. Binod Kumar

Designation: TGT Mathematics

Email: binodprajpati1981@gmail.com

Phone No.:9340880348

Name of the Vidyalaya: K. V.Sarni

KVS Region: Bhopal

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|  | **TEST ITEM 20.4 SEATING ARRANGEMENT IN AUDITORIUM**   |  |  |  | | --- | --- | --- | | DOMAIN : - MATHEMATICAL LITERACY | THEME :- QUADRATIC EQUATIONS | CLASS :- X  EXPECTED TIME :- 5 MIN  TOTAL CREDIT :- 2 | | DESCRIPTION OF ITEM  TEXT AND IMAGE | LEARNING OUTCOMES :- | To make the students aware of the properties of quadratic equations and solve quadratic equation. |   **MATHEMATICAL LITERACY**   |  |  | | --- | --- | | FRAMEWORK | CHARACTERISTICS | | Competency Cluster | Connections | | Overarching Idea | Change and relationship | | Context | Societal | | Item Format | * 1. Closed constructed response | | Cognitive process | Interpreting, problem solving. | | Proficiency level | 3 |   Credit Pattern:  Full Credit: 2 Partial Credits: 1 No Credit: 0  Description of Answer Key and Credits:   |  | | --- | | ANSWERS 20.4 Full credit 1200 No credit Other responses and missing | |
|  |  |

Name of the Teacher/Item Writer: Mr. Binod Kumar

Designation: TGT Mathematics

Email: binodprajpati1981@gmail.com

Phone No.:9340880348

Name of the Vidyalaya: K. V.Sarni

KVS Region: Bhopal

**TEST ITEM 21.1 LAND DONATION**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- QUADRATIC EQUATIONS | CLASS :- X  EXPECTED TIME :- 5 MIN  TOTAL CREDIT :- 2 |
| DESCRIPTION OF ITEM  TEXT AND IMAGE | LEARNING OUTCOMES :- | To make the students aware of the properties of circles and solve quadratic equation. |

**MATHEMATICAL LITERACY**

|  |  |
| --- | --- |
| FRAMEWORK | CHARACTERISTICS |
| Competency Cluster | Connections |
| Overarching Idea | Change and relationship |
| Context | Societal |
| Item Format | * 1. Simple multiple choice |
| Cognitive process | Interpreting, problem solving. |
| Proficiency level | 2 |

**Credit Pattern:**

Full Credit: 2 Partial Credit: 1 No Credit: 0

**Description of Answer Key and Credits:**

|  |
| --- |
| ANSWERS 21.1 Full credit ( c) right triangle  No credit Other responses and missing |

Name of the Teacher/Item Writer: Mr. S P Goldar

Designation: TGT Mathematics

Email: milisili121067@rediffmail.com

Phone No.:8982741857

Name of the Vidyalaya: K. V.Hoshangabad

KVS Region: Bhopal

**TEST ITEM 21.2 LAND DONATION**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- QUADRATIC EQUATIONS | CLASS :- X  EXPECTED TIME :- 5 MIN  TOTAL CREDIT :- 2 |
| DESCRIPTION OF ITEM  TEXT AND IMAGE | LEARNING OUTCOMES :- | To make the students aware of the properties of circles and solve quadratic equation. |

**MATHEMATICAL LITERACY**

|  |  |
| --- | --- |
| FRAMEWORK | CHARACTERISTICS |
| Competency Cluster | Connections |
| Overarching Idea | Change and relationship |
| Context | Educational |
| Item Format | 21.2 Closed constructed response |
| Cognitive process | Interpreting, problem solving. |
| Proficiency level | 4 |

**Credit Pattern:**

Full Credit: 2 Partial Credit: 1 No Credit: 0

**Description of Answer Key and Credits:**

|  |
| --- |
| 21.2 Full credit   BC = 15 m, AD = 24 m  No credit Other responses and missing |

Name of the Teacher/Item Writer: Mr. S P Goldar

Designation: TGT Mathematics

Email: milisili121067@rediffmail.com

Phone No.:8982741857

Name of the Vidyalaya: K. V.Hoshangabad

KVS Region: Bhopal

**TEST ITEM 21.3LAND DONATION**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- QUADRATIC EQUATIONS | CLASS :- X  EXPECTED TIME :- 5 MIN  TOTAL CREDIT :- 2 |
| DESCRIPTION OF ITEM  TEXT AND IMAGE | LEARNING OUTCOMES :- | To make the students aware of the properties of circles and solve quadratic equation. |

**MATHEMATICAL LITERACY**

|  |  |
| --- | --- |
| FRAMEWORK | CHARACTERISTICS |
| Competency Cluster | Connections |
| Overarching Idea | Change and relationship |
| Context | Educational |
| Item Format | 21.3 Closed constructed response |
| Cognitive process | Interpreting, problem solving. |
| Proficiency level | 3 |

**Credit Pattern:**

Full Credit: 2 Partial Credit: 1 No Credit: 0

**Description of Answer Key and Credits:**

|  |
| --- |
| 21.3 Full credit   84 squaremeter  Partial credit if values is correct but solution is wrong  No credit Other responses and missing |

Name of the Teacher/Item Writer: Mr. S P Goldar

Designation: TGT Mathematics

Email: milisili121067@rediffmail.com

Phone No.:8982741857

Name of the Vidyalaya: K. V.Hoshangabad

KVS Region: Bhopal

**TEST ITEM 21.4 LAND DONATION**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- QUADRATIC EQUATIONS | CLASS :- X  EXPECTED TIME :- 5 MIN  TOTAL CREDIT :- 2 |
| DESCRIPTION OF ITEM  TEXT AND IMAGE | LEARNING OUTCOMES :- | To make the students aware of the properties of circles and solve quadratic equation. |

**MATHEMATICAL LITERACY**

|  |  |
| --- | --- |
| FRAMEWORK | CHARACTERISTICS |
| Competency Cluster | Connections |
| Overarching Idea | Change and relationship |
| Context | Educational |
| Item Format | Closed constructed response |
| Cognitive process | Interpreting, problem solving. |
| Proficiency level | 4 |

**Credit Pattern:**

Full Credit: 2 Partial Credit: 1 No Credit: 0

**Description of Answer Key and Credits:**

|  |
| --- |
| 21.4 Full credit 150 sq. m  No credit Other responses and missing |

Name of the Teacher/Item Writer: Mr. S P Goldar

Designation: TGT Mathematics

Email: milisili121067@rediffmail.com

Phone No.:8982741857

Name of the Vidyalaya: K. V.Hoshangabad

KVS Region: Bhopal