FINAL QUESTIONS OF EUCLID’S GEOMERTY

**TEST ITEM 1.1 CURVES AND LINES**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- INTRODUCTION TO EUCLIDS GEOMETRY | CLASS :- IX  EXPECTED TIME :- 5 MIN  TOTAL CREDIT :- 2 |
| DESCRIPTION OF ITEM  TEXT AND IMAGE | LEARNING OUTCOMES :- | To make the students aware of the concepts of curves and lines. |

Mathematical Literacy

|  |  |
| --- | --- |
| **FRAMEWORK** | **CHARACTERISTICS** |
| Competency Cluster | Reflection |
| Overarching Idea | Space and Shape |
| Context | Scientific |
| Item Format | Complex multiple choice |
| Cognitive process | Interpreting |
| Proficiency level | 3 |

Credit Pattern:

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

Description of Answer Key and Credits:

|  |
| --- |
| ANSWERS 1.1 Full credit : (i)a and b  No creditOther responses and missing |

**TEST ITEM 1.2 CURVES AND LINES**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- INTRODUCTION TO EUCLIDS GEOMETRY | CLASS :- IX  EXPECTED TIME :- 5 MIN  TOTAL CREDIT :- 2 |
| DESCRIPTION OF ITEM  TEXT AND IMAGE | LEARNING OUTCOMES :- | To make the students aware of the concepts of curves and lines. |

Mathematical Literacy

|  |  |
| --- | --- |
| **FRAMEWORK** | **CHARACTERISTICS** |
| Competency Cluster | Reflection |
| Overarching Idea | Space and Shape |
| Context | Scientific |
| Item Format | Simple multiple choice |
| Cognitive process | Interpreting |
| Proficiency level | 2 |

Credit Pattern:

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

Description of Answer Key and Credits:

|  |
| --- |
| ANSWERS  Full credit : A) Open Curve  No Credit : Other responses and missing |

**TEST ITEM 1.3 CURVES AND LINES**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- INTRODUCTION TO EUCLIDS GEOMETRY | CLASS :- IX  EXPECTED TIME :- 5 MIN  TOTAL CREDIT :- 2 |
| DESCRIPTION OF ITEM  TEXT AND IMAGE | LEARNING OUTCOMES :- | To make the students aware of the concepts of curves and lines. |

Mathematical Literacy

|  |  |
| --- | --- |
| **FRAMEWORK** | **CHARACTERISTICS** |
| Competency Cluster | Reflection |
| Overarching Idea | Space and Shape |
| Context | Scientific |
| Item Format | Closed constructed response |
| Cognitive process | Interpreting |
| Proficiency level | 3 |

Credit Pattern:

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

Description of Answer Key and Credits:

|  |
| --- |
| ANSWERS Full credit : (i) correct (ii) incorrect  Partial Credit :If any one answer is correct  No credit : Other responses and missing |

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**TEST ITEM 2.1 ROW HOUSES**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- EUCLID’S GEOMETRY | CLASS :- IX  EXPECTED TIME :- 5 MIN  TOTAL CREDIT :- 2 |
| DESCRIPTION OF ITEM  TEXT, IMAGE AND SHAPE | LEARNING OUTCOMES :- | To make the students aware of the Euclid’s Axioms. |

**Mathematical Literacy**

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

**Credit Pattern:**

Full Credit: 2

Partial Credit: 1

No Credit: 0

**Description of Answer Key and Credits:**

|  |
| --- |
| ANSWERS 2.1 (b) JM = JS  No credit Other responses and missing |

**TEST ITEM 2.2 ROW HOUSES**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- EUCLID’S GEOMETRY | CLASS :- IX  EXPECTED TIME :- 5 MIN  TOTAL CREDIT :- 2 |
| DESCRIPTION OF ITEM  TEXT AND SHAPE | LEARNING OUTCOMES :- | To make the students aware of the Euclid’s Axioms. |

**Mathematical Literacy**

|  |  |
| --- | --- |
| FRAMEWORK | **CHARACTERISTICS** |
| Competency Cluster | Connection |
| Overarching Idea | Change and relationship |
| Context | Societal |
| Item Format | Complex multiple choice |
| Cognitive process | Interpreting , |
| Proficiency level | 3 |

**Credit Pattern:**

Full Credit: 2

Partial Credit: 1

No Credit: 0

**Description of Answer Key and Credits:**

|  |
| --- |
| ANSWERS  Full credit(ii) a and d  No credit Other responses and missing |

**TEST ITEM 2.3 ROW HOUSES**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- EUCLID’S GEOMETRY | CLASS :- IX  EXPECTED TIME :- 5 MIN  TOTAL CREDIT :- 2 |
| DESCRIPTION OF ITEM  TEXT AND SHAPE | LEARNING OUTCOMES :- | To make the students aware of the Euclid’s Axioms. |

**Mathematical Literacy**

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

**Credit Pattern:**

Full Credit: 2

Partial Credit: 1

No Credit: 0

**Description of Answer Key and Credits:**

|  |
| --- |
| ANSWERS Full credit true. Things which are equal to the same thing are equal to one another.  No credit Other responses and missing |

**TEST ITEM 2.4 ROW HOUSES**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- EUCLID’S GEOMETRY | CLASS :- IX  EXPECTED TIME :- 5 MIN  TOTAL CREDIT :- 2 |
| DESCRIPTION OF ITEM  TEXT AND SHAPE | LEARNING OUTCOMES :- | To make the students aware of the Euclid’s Axioms. |

**Mathematical Literacy**

|  |  |
| --- | --- |
| FRAMEWORK | **CHARACTERISTICS** |
| Competency Cluster | Connection |
| Overarching Idea | Change and relationship |
| Context | Societal |
| Item Format | Open constructed response |
| Cognitive process | Interpreting , |
| Proficiency level | 3 |

**Credit Pattern:**

Full Credit: 2

Partial Credit: 1

No Credit: 0

**Description of Answer Key and Credits:**

|  |
| --- |
| ANSWERS Full credit JM, MS, JS  Partial credit if two written correctly.  No credit Other responses and missing |

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**TEST ITEM 3.1 DISCUSSION OF TWO FRIENDS**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- EUCLID’S GEOMETRY | CLASS :- IX  EXPECTED TIME :- 5 MIN  TOTAL CREDIT :- 2 |
| DESCRIPTION OF ITEM  TEXT AND SHAPE | LEARNING OUTCOMES :- | To make the students aware of the Euclid’s Postulates. |

**Mathematical Literacy**

|  |  |
| --- | --- |
| FRAMEWORK | **CHARACTERISTICS** |
| Competency Cluster | reflection |
| Overarching Idea | Change and relationship |
| Context | Societal |
| Item Format | Short response item |
| Cognitive process | Interpreting , |
| Proficiency level | 2 |

**Credit Pattern:**

Full Credit: 2

Partial Credit: 1

No Credit: 0

**Description of Answer Key and Credits:**

|  |
| --- |
| ANSWERS 3.1 No. only one line.  No credit Other responses and missing |

**TEST ITEM 3.2 DISCUSSION OF TWO FRIENDS**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- EUCLID’S GEOMETRY | CLASS :- IX  EXPECTED TIME :- 5 MIN  TOTAL CREDIT :- 2 |
| DESCRIPTION OF ITEM  TEXT AND SHAPE | LEARNING OUTCOMES :- | To make the students aware of the Euclid’s Postulates. |

**Mathematical Literacy**

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

**Credit Pattern:**

Full Credit: 2

Partial Credit: 1

No Credit: 0

**Description of Answer Key and Credits:**

|  |
| --- |
| ANSWERS  Full credit AB = CD  No credit Other responses and missing |

**TEST ITEM 3.3 DISCUSSION OF TWO FRIENDS**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- EUCLID’S GEOMETRY | CLASS :- IX  EXPECTED TIME :- 5 MIN  TOTAL CREDIT :- 2 |
| DESCRIPTION OF ITEM  TEXT AND SHAPE | LEARNING OUTCOMES :- | To make the students aware of the Euclid’s Postulates. |

**Mathematical Literacy**

|  |  |
| --- | --- |
| FRAMEWORK | **CHARACTERISTICS** |
| Competency Cluster | reflection |
| Overarching Idea | Change and relationship |
| Context | Societal |
| Item Format | Short response item |
| Cognitive process | Interpreting , |
| Proficiency level | 3 |

**Credit Pattern:**

Full Credit: 2

Partial Credit: 1

No Credit: 0

**Description of Answer Key and Credits:**

|  |
| --- |
| ANSWERS Full credit 3.  No credit Other responses and missing |

**TEST ITEM 3.4 DISCUSSION OF TWO FRIENDS**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- EUCLID’S GEOMETRY | CLASS :- IX  EXPECTED TIME :- 5 MIN  TOTAL CREDIT :- 2 |
| DESCRIPTION OF ITEM  TEXT AND SHAPE | LEARNING OUTCOMES :- | To make the students aware of the Euclid’s Postulates. |

**Mathematical Literacy**

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

**Credit Pattern:**

Full Credit: 2

Partial Credit: 1

No Credit: 0

**Description of Answer Key and Credits:**

|  |
| --- |
| ANSWERS Full credit triangle  No credit Other responses and missing |

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**TEST ITEM 4.1 EUCLID’S FIFTH POSTULATE**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- EUCLID’S GEOMETRY | CLASS :- IX  EXPECTED TIME :- 5 MIN  TOTAL CREDIT :- 2 |
| DESCRIPTION OF ITEM  TEXT AND SHAPE | LEARNING OUTCOMES :- | To make the students aware of the concept of parallel and nonparallel lines |

**Mathematical Literacy**

|  |  |
| --- | --- |
| FRAMEWORK | CHARACTERISTICS |
| Competency Cluster | reflection |
| Overarching Idea | Change and relationship |
| Context | Scientific |
| Item Format | Closed constructed responses |
| Cognitive process | Interpreting ,. |
| Proficiency level | 2 |

**Credit Pattern:**

Full Credit: 2

Partial Credit: 1

No Credit: 0

**Description of Answer Key and Credits:**

|  |
| --- |
| ANSWERS 4.1 correct  No credit Other responses and missing |

**TEST ITEM 4.2EUCLID’S FIFTH POSTULATE**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- EUCLID’S GEOMETRY | CLASS :- IX  EXPECTED TIME :- 5 MIN  TOTAL CREDIT :- 2 |
| DESCRIPTION OF ITEM  TEXT AND SHAPE | LEARNING OUTCOMES :- | To make the students aware of the concept of parallel and nonparallel lines |

**Mathematical Literacy**

|  |  |
| --- | --- |
| FRAMEWORK | CHARACTERISTICS |
| Competency Cluster | reflection |
| Overarching Idea | Change and relationship |
| Context | Scientific |
| Item Format | Closed constructed responses |
| Cognitive process | Interpreting ,. |
| Proficiency level | 3 |

**Credit Pattern:**

Full Credit: 2

Partial Credit: 1

No Credit: 0

**Description of Answer Key and Credits:**

|  |
| --- |
| ANSWERS 4.2 incorrectl  No credit Other responses and missing |

**TEST ITEM 4.3EUCLID’S FIFTH POSTULATE**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- EUCLID’S GEOMETRY | CLASS :- IX  EXPECTED TIME :- 5 MIN  TOTAL CREDIT :- 2 |
| DESCRIPTION OF ITEM  TEXT AND SHAPE | LEARNING OUTCOMES :- | To make the students aware of the concept of parallel and nonparallel lines |

**Mathematical Literacy**

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

**Credit Pattern:**

Full Credit: 2

Partial Credit: 1

No Credit: 0

**Description of Answer Key and Credits:**

|  |
| --- |
| ANSWERS  Full credit correct  No credit Other responses and missing |

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**TEST ITEM 5.1 JOHN PLAYFAIR’S VIEW**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- EUCLID’S GEOMETRY | CLASS :- IX  EXPECTED TIME :- 5 MIN  TOTAL CREDIT :- 2 |
| DESCRIPTION OF ITEM  TEXT AND SHAPE | LEARNING OUTCOMES :- | To make the students aware of the Equivalent version of Euclid’s fifth Postulate. |

**Mathematical Literacy**

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

**Credit Pattern:**

Full Credit: 2

Partial Credit: 1

No Credit: 0

**Description of Answer Key and Credits:**

|  |
| --- |
| ANSWERS 5.1 (b) infinite  No credit Other responses and missing |

**TEST ITEM 5.2 JOHN PLAYFAIR’S VIEW**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- EUCLID’S GEOMETRY | CLASS :- IX  EXPECTED TIME :- 5 MIN  TOTAL CREDIT :- 2 |
| DESCRIPTION OF ITEM  TEXT AND SHAPE | LEARNING OUTCOMES :- | To make the students aware of the Equivalent version of Euclid’s fifth Postulate. |

**Mathematical Literacy**

|  |  |
| --- | --- |
| FRAMEWORK | **CHARACTERISTICS** |
| Competency Cluster | reflection |
| Overarching Idea | Change and relationship |
| Context | Scientific |
| Item Format | simple multiple choice |
| Cognitive process | Interpreting ,. |
| Proficiency level | 3 |

**Credit Pattern:**

Full Credit: 2

Partial Credit: 1

No Credit: 0

**Description of Answer Key and Credits:**

|  |
| --- |
| ANSWERS  Full credit (a) One  No credit Other responses and missing |

**TEST ITEM 5.3 JOHN PLAYFAIR’S VIEW**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- EUCLID’S GEOMETRY | CLASS :- IX  EXPECTED TIME :- 5 MIN  TOTAL CREDIT :- 2 |
| DESCRIPTION OF ITEM  TEXT AND SHAPE | LEARNING OUTCOMES :- | To make the students aware of the Equivalent version of Euclid’s fifth Postulate. |

**Mathematical Literacy**

|  |  |
| --- | --- |
| FRAMEWORK | **CHARACTERISTICS** |
| Competency Cluster | reflection |
| Overarching Idea | Change and relationship |
| Context | Scientific |
| Item Format | simple multiple choice |
| Cognitive process | Interpreting ,. |
| Proficiency level | 2 |

**Credit Pattern:**

Full Credit: 2

Partial Credit: 1

No Credit: 0

**Description of Answer Key and Credits:**

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

**TEST ITEM 5.4 JOHN PLAYFAIR’S VIEW**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- EUCLID’S GEOMETRY | CLASS :- IX  EXPECTED TIME :- 5 MIN  TOTAL CREDIT :- 2 |
| DESCRIPTION OF ITEM  TEXT AND SHAPE | LEARNING OUTCOMES :- | To make the students aware of the Equivalent version of Euclid’s fifth Postulate. |

**Mathematical Literacy**

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

**Credit Pattern:**

Full Credit: 2

Partial Credit: 1

No Credit: 0

**Description of Answer Key and Credits:**

|  |
| --- |
| Full credit 9  No credit Other responses and missing |

**TEST ITEM 5.5 JOHN PLAYFAIR’S VIEW**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- EUCLID’S GEOMETRY | CLASS :- IX  EXPECTED TIME :- 5 MIN  TOTAL CREDIT :- 2 |
| DESCRIPTION OF ITEM  TEXT AND SHAPE | LEARNING OUTCOMES :- | To make the students aware of the Equivalent version of Euclid’s fifth Postulate. |

**Mathematical Literacy**

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

**Credit Pattern:**

Full Credit: 2

Partial Credit: 1

No Credit: 0

**Description of Answer Key and Credits:**

|  |
| --- |
| ANSWERS :- Full credit x = 8  Partial credit : - AB + BC = AC  No credit:- Other responses and missing |

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**TEST ITEM 6.1 PRIME MINISTER’S RELIEF FUND**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- INTRODUCTION TO EUCLIDS GEOMETRY | CLASS :- IX  EXPECTED TIME :- 5 MIN  TOTAL CREDIT :- 2 |
| DESCRIPTION OF ITEM  TEXT AND IMAGE | LEARNING OUTCOMES :- | To make the students aware of the properties of Euclid’s Geometry |

**Mathematical Literacy**

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

**Credit Pattern:**

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

**Description of Answer Key and Credits:**

|  |
| --- |
| ANSWERS Full credit Rs 500  No credit Other responses and missing |

**TEST ITEM 6.2 PRIME MINISTER’S RELIEF FUND**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- INTRODUCTION TO EUCLIDS GEOMETRY | CLASS :- IX  EXPECTED TIME :- 5 MIN  TOTAL CREDIT :- 2 |
| DESCRIPTION OF ITEM  TEXT AND IMAGE | LEARNING OUTCOMES :- | To make the students aware of the properties of Euclid’s Geometry |

**Mathematical Literacy**

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

**Credit Pattern:**

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

**Description of Answer Key and Credits:**

|  |
| --- |
| Full credit:- Axiom 1 If A = B, B = C ⇒ A = C  No credit:- Other responses and missing |

TEST ITEM 6.3 PRIME MINISTER’S RELIEF FUND

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- INTRODUCTION TO EUCLIDS GEOMETRY | CLASS :- IX  EXPECTED TIME :- 5 MIN  TOTAL CREDIT :- 2 |
| DESCRIPTION OF ITEM  TEXT AND IMAGE | LEARNING OUTCOMES :- | To make the students aware of the properties of Euclid’s Geometry |

**Mathematical Literacy**

|  |  |
| --- | --- |
| FRAMEWORK | **CHARACTERISTICS** |
| Competency Cluster | Connections |
| Overarching Idea | Change and relationship |
| Context | Societal |
| Item Format | Short response item |
| Cognitive process | Interpreting , employ |
| Proficiency level | 2 |

**Credit Pattern:**

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

**Description of Answer Key and Credits:**

|  |
| --- |
| ANSWERS  Full credit:-Rs. 500  No credit:- Other responses and missing |

**TEST ITEM 6.4 PRIME MINISTER’S RELIEF FUND**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- INTRODUCTION TO EUCLIDS GEOMETRY | CLASS :- IX  EXPECTED TIME :- 5 MIN  TOTAL CREDIT :- 2 |
| DESCRIPTION OF ITEM  TEXT AND IMAGE | LEARNING OUTCOMES :- | To make the students aware of the properties of Euclid’s Geometry |

**Mathematical Literacy**

|  |  |
| --- | --- |
| FRAMEWORK | **CHARACTERISTICS** |
| Competency Cluster | Connections |
| Overarching Idea | Change and relationship |
| Context | Societal |
| Item Format | Open constructed response |
| Cognitive process | Interpreting , employ |
| Proficiency level | 3 |

**Credit Pattern:**

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

**Description of Answer Key and Credits:**

|  |
| --- |
| ANSWERS  Full credit: Value of help, care and concern towards other is shown by contributing towards Prime minister Relief Fund.  Partial credit if any similar values are correct.  No credit Other responses and missing |

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**TEST ITEM 7.1 APPLICATION OF AXIOM 5**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- INTRODUCTION TO EUCLIDS GEOMETRY | CLASS : - IX  EXPECTED TIME :- 4 MIN  TOTAL CREDIT :- 2 |
| DESCRIPTION OF ITEM  TEXT AND IMAGE | LEARNING OUTCOMES :- | To make the students aware of the concept of collinear points. |

**Mathematical Literacy**

|  |  |
| --- | --- |
| FRAMEWORK | **CHARACTERISTICS** |
| Competency Cluster | Connections |
| Overarching Idea | Change and relationship |
| Context | Scientific |
| 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:

|  |
| --- |
| ANSWERS  7.1 Full credit (d) 2:1  No credit Other responses and missing |

**TEST ITEM 7.2 APPLICATION OF AXIOM 5**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- INTRODUCTION TO EUCLIDS GEOMETRY | CLASS : - IX  EXPECTED TIME :- 4 MIN  TOTAL CREDIT :- 2 |
| DESCRIPTION OF ITEM  TEXT AND IMAGE | LEARNING OUTCOMES :- | To make the students aware of the concept of collinear points. |

**Mathematical Literacy**

|  |  |
| --- | --- |
| FRAMEWORK | **CHARACTERISTICS** |
| Competency Cluster | Connections |
| 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 No Credit: 0

Description of Answer Key and Credits:

|  |
| --- |
| ANSWER 7.2 Full credit PQ2 +PR 2-2PQ. PR = ( PQ-PR )2 = RQ2 =16 cm 2  Partial credit if formula is correct but solution is wrong  No credit Other responses and missing |

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**TEST ITEM 8.1 APPLICATIONS OF EUCLIDS GEOMETRY**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- INTRODUCTION TO EUCLIDS GEOMETRY | CLASS :- IX  EXPECTED TIME :- 5 MIN  TOTAL CREDIT :- 6 |
| DESCRIPTION OF ITEM  TEXT AND IMAGE | LEARNING OUTCOMES :- | To make the students aware of thefundamental concepts of Geometry. |

**Mathematical Literacy**

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

Credit Pattern:

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

Description of Answer Key and Credits:

|  |
| --- |
| ANSWERS Full credit : Both (i)&(ii) are Mathematical Statement  Partial credit : If any one opted as Mathematical Statement  No credit:If both (i) &(ii) are Non Mathematical |

**TEST ITEM 8.2 APPLICATIONS OF EUCLIDS GEOMETRY**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- INTRODUCTION TO EUCLIDS GEOMETRY | CLASS :- IX  EXPECTED TIME :- 5 MIN  TOTAL CREDIT :- 6 |
| DESCRIPTION OF ITEM  TEXT AND IMAGE | LEARNING OUTCOMES :- | To make the students aware of thefundamental concepts of Geometry. |

**Mathematical Literacy**

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

Credit Pattern:

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

Description of Answer Key and Credits:

|  |
| --- |
| ANSWERSFull credit : Yes, it is conjucture .Even if we don’t see the next number we can correctly guess it by observing the pattern generated. Or any relevant explaination.  Partial Credit : Yes & reason not clearly explained.  No Credit : Other responses and missing |

**TEST ITEM 8.3 APPLICATIONS OF EUCLIDS GEOMETRY**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- INTRODUCTION TO EUCLIDS GEOMETRY | CLASS :- IX  EXPECTED TIME :- 5 MIN  TOTAL CREDIT :- 6 |
| DESCRIPTION OF ITEM  TEXT AND IMAGE | LEARNING OUTCOMES :- | To make the students aware of thefundamental concepts of Geometry. |

**Mathematical Literacy**

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

Credit Pattern:

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

Description of Answer Key and Credits:

|  |
| --- |
| ANSWERS Full credit : Yes, it is an axiom. Because we do not need a proof to state its truth as it is evident in itself.  Partial Credit : Yes & reason not clearly explained.  No credit : Other responses and missing |

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**TEST ITEM 9.1 BENEFITS OF CNG**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- INTRODUCTION TO EUCLIDS GEOMETRY | CLASS :- IX  EXPECTED TIME :- 5 MIN  TOTAL CREDIT :- 2 |
| DESCRIPTION OF ITEM  TEXT AND IMAGE | LEARNING OUTCOMES :- | To make the students relate Euclid’s Geometry to real life situations. |

**Mathematical Literacy**

|  |  |
| --- | --- |
| FRAMEWORK | **CHARACTERISTICS** |
| Competency Cluster | Connections |
| Overarching Idea | Change and relationship |
| Context | Scientific |
| Item Format | 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:**

|  |
| --- |
| ANSWERS X + 15 = 25  No credit Other responses and missing |

**TEST ITEM 9.2 BENEFITS OF CNG**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- INTRODUCTION TO EUCLIDS GEOMETRY | CLASS :- IX  EXPECTED TIME :- 5MIN  TOTAL CREDIT :- 2 |
| DESCRIPTION OF ITEM  TEXT AND IMAGE | LEARNING OUTCOMES :- | To make the students relate Euclid’s Geometry to real life situations. |

**Mathematical Literacy**

|  |  |
| --- | --- |
| FRAMEWORK | CHARACTERISTICS |
| Competency Cluster | Connections |
| Overarching Idea | Change and relationship |
| Context | Scientific |
| Item Format | 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:**

|  |
| --- |
| ANSWERS  Full credit .X + 15 = 25  ( Using Euclid’s 3rd Axiom “ things equals subtracted from equals remainder are equals’ )  X + 15 – 15 = 25 – 15  X = 10  No credit Other responses and missing |

**TEST ITEM 9.3 BENEFITS OF CNG**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- INTRODUCTION TO EUCLIDS GEOMETRY | CLASS :- IX  EXPECTED TIME :- 5MIN  TOTAL CREDIT :- 2 |
| DESCRIPTION OF ITEM  TEXT AND IMAGE | LEARNING OUTCOMES :- | To make the students relate Euclid’s Geometry to real life situations. |

**Mathematical Literacy**

|  |  |
| --- | --- |
| FRAMEWORK | CHARACTERISTICS |
| Competency Cluster | Connections |
| Overarching Idea | Change and relationship |
| Context | Educational |
| Item Format | Open 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:**

|  |
| --- |
| ANSWERS  Full credit Caring for the environment and looking for the other alternatives of fuel.  No credit Other responses and missing |

**TEST ITEM 9.4 BENEFITS OF CNG**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- INTRODUCTION TO EUCLIDS GEOMETRY | CLASS :- IX  EXPECTED TIME :- 5 MIN  TOTAL CREDIT :- 2 |
| DESCRIPTION OF ITEM  TEXT AND IMAGE | LEARNING OUTCOMES :- | To make the students relate Euclid’s Geometry to real life situations. |

**Mathematical Literacy**

|  |  |
| --- | --- |
| FRAMEWORK | **CHARACTERISTICS** |
| Competency Cluster | Connections |
| Overarching Idea | Change and relationship |
| Context | Educational |
| Item Format | Open 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:**

|  |
| --- |
| Full credit Compressed Natural Gas  No credit Other responses and missing |

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**TEST ITEM 10.1 A STORY OF TWO FRIENDS**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- EUCLID’S GEOMETRY | CLASS :- IX  EXPECTED TIME :- 5 MIN  TOTAL CREDIT :- 2 |
| DESCRIPTION OF ITEM  TEXT | LEARNING OUTCOMES :- | To make the students aware of the Euclid’s Axioms. |

**Mathematical Literacy**

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

**Credit Pattern:**

Full Credit: 2

Partial Credit: 1

No Credit: 0

**Description of Answer Key and Credits:**

|  |
| --- |
| ANSWERS (b) (x +5 ) kg  No credit Other responses and missing |

**TEST ITEM 10.2 A STORY OF TWO FRIENDS**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- EUCLID’S GEOMETRY | CLASS :- IX  EXPECTED TIME :- 5 MIN  TOTAL CREDIT :- 2 |
| DESCRIPTION OF ITEM  TEXT | LEARNING OUTCOMES :- | To make the students aware of the Euclid’s Axioms. |

**Mathematical Literacy**

|  |  |
| --- | --- |
| FRAMEWORK | CHARACTERISTICS |
| Competency Cluster | Reflection |
| Overarching Idea | Change and relationship |
| Context | Societal |
| Item Format | Closed constructed response |
| Cognitive process | Interpreting |
| Proficiency level | 2 |

**Credit Pattern:**

Full Credit: 2

Partial Credit: 1

No Credit: 0

**Description of Answer Key and Credits:**

|  |
| --- |
| ANSWERS  Full credit Axiom 2  No credit Other responses and missing |

**TEST ITEM 10.3 A STORY OF TWO FRIENDS**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- EUCLID’S GEOMETRY | CLASS :- IX  EXPECTED TIME :- 5 MIN  TOTAL CREDIT :- 2 |
| DESCRIPTION OF ITEM  TEXT | LEARNING OUTCOMES :- | To make the students aware of the Euclid’s Axioms. |

**Mathematical Literacy**

|  |  |
| --- | --- |
| FRAMEWORK | **CHARACTERISTICS** |
| Competency Cluster | Reflection |
| Overarching Idea | Change and relationship |
| Context | Societal |
| Item Format | Closed constructed response |
| Cognitive process | Interpreting |
| Proficiency level | 3 |

**Credit Pattern:**

Full Credit: 2

Partial Credit: 1

No Credit: 0

**Description of Answer Key and Credits:**

|  |
| --- |
| ANSWERS  Full credit True.  No credit Other responses |

**TEST ITEM 10.4 A STORY OF TWO FRIENDS**

|  |  |  |
| --- | --- | --- |
| DOMAIN : - MATHEMATICAL LITERACY | THEME :- EUCLID’S GEOMETRY | CLASS :- IX  EXPECTED TIME :- 5 MIN  TOTAL CREDIT :- 2 |
| DESCRIPTION OF ITEM  TEXT | LEARNING OUTCOMES :- | To make the students aware of the Euclid’s Axioms. |

**Mathematical Literacy**

|  |  |
| --- | --- |
| FRAMEWORK | CHARACTERISTICS |
| Competency Cluster | Reflection |
| Overarching Idea | Change and relationship |
| Context | Societal |
| Item Format | Closed constructed response |
| Cognitive process | Interpreting |
| Proficiency level | 1 |

**Credit Pattern:**

Full Credit: 2

Partial Credit: 1

No Credit: 0

**Description of Answer Key and Credits:**

|  |
| --- |
| ANSWERS Full credit  Axiom 7.  No credit Other responses and missing |

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