**Template for Essay Type Item**

**Subject: Mathematics**

**Domain: A-Numbers and operations**

**Grade: 8**

**Unit: 3. Square roots and cube roots**

**Type of Assessment: Formative**

**SLO: (M -08 - A -16)** find the square root of natural numbers, common fractions and decimal numbers (up to 6 -digit).

**Type of Task:** Constructed response

**Level of SLO:** Comprehension

**Task:** Find the Square root of **(05) Marks**

**Level of Item:** Comprehension

**Expected Response:**



7.84

61.4656

- 49

7

**Skill observed:** pairing and calculate the perfect square.

1564

1246

- 1184

6256

-6256

0

148

**Name and Signature of Developer**

**Uzma Nazir**

**Reviewer Comments:**

**Name and Signature of Reviewer**

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**SLO: (M -08 - A -16)** find the square root of natural numbers, common fractions and decimal numbers (up to 6 -digit).

**Type of Task:** Constructed response

**Level of SLO:** Comprehension

**Task:** Find the Square root of **(05) Marks**

**Level of Item:** Comprehension

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Expected Response**   |  |  | | --- | --- | | 11 | 12100 | | 11 | 1100 | | 10 | 100 | | 10 | 10 | |  | 1 | | |  |  | | --- | --- | | **Skill observed**  Taking square root by factorization method.  Simplification of question.  Answer | **Score**  02 Marks  02 Marks  01 Mark | |



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**Unit: 3. Square roots and cube roots**

**Type of Assessment: Formative**

**SLO: (M -08 - A -17)** Solve real -world word problems involving squares and square roots.

**Type of Task:** Constructed response

**Level of SLO:** Application

**Task:** Area of a wheel is 22176 cm2. Find the Diameter of the wheel. **(05) Marks**

**Level of Item:** Application

|  |  |  |
| --- | --- | --- |
| **Expected Response** | **Skill Observed** | **Score** |
|  | Formula  Calculation  Answer | 01 Mark  03 Marks  01 Mark |

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**Template for Essay Type Item**

**Subject: Mathematics**

**Domain: A-Numbers and Operations**

**Grade: 8**

**Unit: 3. Square roots and cube roots**

**Type of Assessment: Summative**

**SLO: (M -08 - A -17)** Solve real -world word problems involving squares and square roots.

**Type of Task:** Constructed response

**Level of SLO:** Application

**Task:** The area of Square Park is 93025 m2. If you complete  round, of the square park, how much distance you travelled? **(05) Marks**

**Level of Item:** Application

|  |  |  |
| --- | --- | --- |
| **Expected Response** | **Skill Observed** | **Score** |
|  | Formula  Calculation  Answer | 01 Mark  03 Marks  01 Mark |

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**Template for Essay Type Item**

**Subject: Mathematics**

**Domain: A-Numbers and operations**

**Grade: 8**

**Unit: 3. Square roots and cube roots**

**Type of Assessment: Formative**

**SLO: (M -08 - A -18)** Recognize perfect cubes and find: -cubes of up to 2-digit numbers - cube roots of up to 5 -digit numbers which are perfect cubes.

**Type of Task:** Constructed response

**Level of SLO:** Comprehension

**Task:** Find cube root of

**Level of Item:** Comprehension

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Expected Response**   |  |  | | --- | --- | | 2 | 1728 | | 2 | 864 | | 2 | 432 | | 2 | 216 | | 2 | 108 | | 2 | 54 | | 3 | 27 | | 3 | 9 | | 3 | 3 | |  | 1 | | |  |  | | --- | --- | | **Skill observed**  Prime factorization and grouping. | **Score**  05 Marks | |

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**Reviewer Comments:**

**Name and Signature of Reviewer**

**Template for Multiple Choice Item**

**Subject: Mathematics**

**Domain: A-Numbers and Operations**

**Grade: 8**

**Unit: 3. Square roots and cube roots**

**Type of Assessment: Formative**

**SLO: (M -08 - A -18)** Recognize perfect cubes and find: -cubes of up to 2-digit numbers - cube roots of up to 5 -digit numbers which are perfect cubes.

**Type of Task:** MCQ

**Level of SLO:** Knowledge

**Task:** The cube of 23 will be?

(A) 92 (B) 529 (C) 12167 (D) 69 **(01) Mark**

**Level of Item:** Knowledge

|  |  |  |
| --- | --- | --- |
| **Expected Response** | **Skill Observed** | **Score** |
| Option (C) is correct. | 233=23x23x23=12167 | 01 Mark |

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**Reviewer Comments:**

**Name and Signature of Reviewer**

**Template for Essay Type Item**

**Subject: Mathematics**

**Domain: A-Numbers and Operations**

**Grade: 8**

**Unit: 3. Square roots and cube roots**

**Type of Assessment: Formative**

**SLO: (M -08 - A -19)** Solve real -world word problems involving cubes and cube roots.

**Type of Task:** Constructed response

**Level of SLO:** Application

**Task:** The side length of cubic room is 21 cm. Find the volume of that room?

**(05) Marks**

**Level of Item:** Application

|  |  |  |
| --- | --- | --- |
| **Expected Response** | **Skill Observed** | **Score** |
|  | Formula  Calculation  Answer | 01 Mark  03 Marks  01 Mark |

**Name and Signature of Developer**

**Uzma Nazir**

**Reviewer Comments:**

**Name and Signature of Reviewer**