**Template for Essay Type Item**

**Subject: Mathematics**

**Domain: A-Numbers and Operations**

**Grade: 7**

**Unit: 1. Rational Numbers**

**Type of Assessment: Formative**

**SLO: (M-07-A01)** With increasing degree of challenge, use the concept of place value for whole numbers, integers, rational numbers and decimal numbers.

**Type of Task:** Constructed response

**Level of SLO:** Comprehension

**Task:** Find the place value of each digit 3251. **(05) Marks**

**Level of Item:** Comprehension

|  |  |  |
| --- | --- | --- |
| **Expected Response** | **Skill Observed** | **Score** |
| In 3251 | Concept of place value for whole number | 1 Mark |
| Place value of 3 | Skill to recognize place value of thousand digit | 1 Mark |
| Place value of 2 | Skill to recognize place value of hundred digit | 1Mark |
| Place value of 5 | Skill to recognize place value of ten digit | 1 Mark |
| Place value of 1 | Skill to recognize place value unit digit | 1 Mark |

**Name and Signature of Developer**

**Asma Riaz**

**Reviewer Comments: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Name and Signature of Reviewer**

**Template for Multiple Choice Item**

**Subject: Mathematics**

**Domain: A-Numbers and Operations**

**Grade: 7**

**Unit: 1. Rational Numbers**

**Type of Assessment: Formative**

**SLO: ( M-07-A02)** Round off whole numbers, integers, rational numbers and decimal numbers to a required degree of accuracy, significance or decimal places (up to 3 decimal places).

**Type of Task:** Multiple Choice Item

**Level of SLO:** Knowledge

**Task:** Give a reasonable estimate and then choose the correct answer 25.8 ÷ 1.2 (**01) Mark**

**Stem:** Give a reasonable estimate and then choose the correct answer 25.8 ÷ 1.2

|  |  |
| --- | --- |
| **Options** | **Reason for choosing Distracter** |
| A) 0.25 | The estimated value of 25.8 $≈$26, 1.2$≈1$ |
| B) 21.5 | 26÷1=26 |
| C) 2.58 | Distracters are A), C), D) because these values are far away from our estimated value which is 26. |
| D) 251 | So, quotient is 26 which is closer to 21.8 (option B is correct) |

**Answer: The correct quotient is B. 21.5. So the answer is reasonable.**

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 **Name and Signature of Reviewer**

**Template for Essay Type Item**

**Subject: Mathematics**

**Domain: A- Numbers and Operations**

**Grade: 7**

**Unit: 1. Rational Numbers**

**Type of Assessment: Formative**

**SLO: (M-07-A-10)** Verify associative and commutative properties of rational numbers.

**Type of Task:** Constructed response

**Level of SLO:** Comprehension

**Task:** Verify commutative property of $8+\left(-1\right)=\left(-1\right)+8$ **(05) Marks**

**Level of Item:** Comprehension

|  |  |  |
| --- | --- | --- |
| **Expected Response** | **Skill Observed** | **Score** |
| In this question$$8+\left(-1\right)=\left(-1\right)+8$$ | Solving L.H. S | 2 Marks |
|  | Solving R.H. S | 2 Marks |
|  | Verify L.H.S$=$R.H.S | 1Mark |

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**Template for Essay Type Item**

**Subject: Mathematics**

**Domain: A-Numbers and Operations**

**Grade: 7**

**Unit: 1. Rational Numbers**

**Type of Assessment: Formative**

**SLO:** **(M-07-A-11)** Verify associative, commutative and distributive properties of rational numbers.

**Type of Task:** Constructed response

**Level of SLO:** Comprehension

**Task:** Name and verify property $\left(-5+1\right)+7=-5+(1+7)$ **(05) Marks**

**Level of Item:** Comprehension

|  |  |  |
| --- | --- | --- |
| **Expected Response** | **Skill Observed** | **Score** |
| In this question$\left(-5+1\right)+7=-5+(1+7)$ | Solving L.H. S | 2 Marks |
|  | Solving R.H.S | 2 Marks |
|  | Verify L.H. S=R.H. S | 1 Mark |

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**Name and Signature of Reviewer**

**Template for Essay Type Item**

**Subject: Mathematics**

**Domain: A-Numbers and operations**

**Grade: 7**

**Unit: 1. Rational Numbers**

**Type of Assessment: Formative**

**SLO:** **(M-07-A-11)** Verify associative, commutative and distributive properties of rational numbers.

**Type of Task:** Constructed response

**Level of SLO:** Comprehension

**Task:** Name and verify property$-2×\left(-4+5\right)=\left(-2\right)×\left(-4\right)+(-2)×(5)$ **(05) Marks**

**Level of Item:** Comprehension

|  |  |  |
| --- | --- | --- |
| **Expected Response** | **Skill Observed** | **Score** |
| In this question$$-2×\left(-4+5\right)=\left(-2\right)×\left(-4\right)+(-2)×(5)$$ | Solving L.H. S | 2 Marks |
|  | Solving R.H.S | 2 Marks |
|  | Verify L.H. S=R.H. S | 1 Mark |

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**Name and Signature of Reviewer**

**Template for Essay Type Item**

**Subject: Mathematics**

**Domain: A-Numbers and operations**

**Grade: 7**

**Unit: 1. Rational Numbers**

**Type of Assessment: Summative**

**SLO: (M-07- A- 12)** Solve real-world problems involving operations on rational numbers.

**Type of Task:** Constructed response

**Level of SLO:** Comprehension

**Task:** Ali says that$3\frac{4}{5}$ is same as 3.45. **(05) Marks**

1. Convert 3 $\frac{4}{5}$ to a decimal.

2. Was ali correct in saying that 3$\frac{4}{5}$ same as 3.45$?$

**Level of Item:** Comprehension

|  |  |  |
| --- | --- | --- |
| **Expected Response** | **Skill Observed** | **Score** |
| In this question | Convert compound fraction into decimals fraction. | 3 Marks |
|  | No, Ali was not Correct | 2 Marks |

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**Name and Signature of Reviewer**

**Template for Essay Type Item**

**Subject: Mathematics**

**Domain: A-Numbers and operations**

**Grade: 7**

**Unit: 1. Rational Numbers**

**Type of Assessment: Formative**

**SLO: (M-07-A-06)** Identify and represent (on a number line) rational numbers.

**Type of Task:** Constructed response

**Level of SLO:** Comprehension

**Task:** Arrange  in descending order. **(05) Marks**

**Level of Item:** Comprehension

 0.3 -0.25 -0.2 -0.1 0 0.1 0.20



|  |  |  |
| --- | --- | --- |
| **Expected Response** | **Skill Observed** | **Score** |
| In this question$=0.25, -0.10, 0.35, -0.25$ | Convert fraction into decimal number. | 1 Mark |
| From greatest to least, the numbers are$$0.35, 0.25, -0.10, -0.25$$Or0.35,  | Write numbers on number line. | 2 Marks |
|  | Write numbers from greatest to least. | 2 Marks |

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**Name and Signature of Reviewer**

**Template for Essay Type Item**

**Subject: Mathematics**

**Domain: A- Numbers and operations**

 **Grade: 7**

**Unit: 1. Rational numbers**

**Type of Assessment: Formative**

**SLO:** **(M-07-A-13)** Recognize the order of operations and use it to solve mathematical expressions involving whole numbers, decimals, fractions and integers.

**Type of Task:** Constructed response

**Level of SLO:** Comprehension

**Task:**  **(05) Marks**

**Level of Item:** Comprehension

|  |  |  |
| --- | --- | --- |
| **Expected Response** | **Skill Observed** | **Score** |
|  | 1. Convert compound fraction into improper fraction.
2. Taking LCM use BODMAS rule to simplify the question.
3. Answer
 | 1. Marks
2. Marks
3. Mark
 |

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**Name and Signature of Reviewer**

**Template for Essay Type Item**

**Subject: Mathematics**

**Domain: A- Numbers and operations**

 **Grade: 7**

**Unit: 1. Rational numbers**

**Type of Assessment: Formative**

**SLO:** **(M-07-A-13)** Recognize the order of operations and use it to solve mathematical expressions involving whole numbers, decimals, fractions and integers.

**Type of Task:** Constructed response

**Level of SLO:** Comprehension

**Task:** The table shows how sadia and salma did during a class test. **(03) Marks**

**Level of Item:** Comprehension

|  |  |  |
| --- | --- | --- |
| Name | Marks Obtained | Total Marks |
| Sadia  | 6 | 12 |
| Salma | 8 | 8 |

Who Scored better, Sadia or Salma?

|  |  |  |
| --- | --- | --- |
| **Expected Response** | **Skill Observed** | **Score** |
| In this question | Sadia has performed better than Salma. | Sadia Scored (01 M)Salma’s Scored (01 M)Comparision of two quantities (01M) |

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**Name and Signature of Reviewer**