**Template for Essay Type Item**

**Subject: Mathematics**

**Domain: A-Numbers and operations**

**Grade: 7**

**Unit: 3. Ratio, Rate and Proportion**

**Type of Assessment: Formative**

**SLO: (M -07 -A – 14)** Calculate rate and average rate of quantities.

**Type of Task:** Constructed response

**Level of SLO:** Comprehension

**Task:** Ali Brought one dozen oranges for Rs 144. What is the cost of 1 orange? **(05) Marks**

**Level of Item:** Comprehension

|  |  |  |
| --- | --- | --- |
| **Expected Response** | **Skill observed** | **Score** |
| In this statement Price Orange per dozen = Rs. 144As 1 doze= 12 orange Price 1 orange Rs 144 ÷ 12Rs= 12 | Data Collection KnowledgeCalculation of Division Answer | (2) Marks(2) Marks(1) Mark |

**Name and Signature of Developer**

**Asma Riaz**

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

**Name and Signature of Reviewer**

**Template for Essay Type Item**

**Subject: Mathematics**

**Domain: A-Numbers and operations**

**Grade: 7**

**Unit: 3. Ratio, Rate and Proportion**

**Type of Assessment: Summative**

**SLO: (M -07 -A – 14)** Calculate rate and average rate of quantities.

**Type of Task:** Constructed response

**Level of SLO:** Comprehension

**Task:** Ayesha read 100 words of his textbook in 5 minutes. Find the rate. **(05) Marks**

**Level of Item:** Comprehension

|  |  |  |
| --- | --- | --- |
| **Expected Response** | **Skill observed** | **Score** |
| Formula of rate = $\frac{words}{minutes}$ = $\frac{100}{5}$ = 20 | FormulaCalculationAnswer | (2) Marks(2) Marks(1) Mark |

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**Template for Essay Type Item**

**Subject: Mathematics**

**Domain: A-Numbers and operations**

**Grade: 7**

**Unit: 3. Ratio, Rate and Proportion**

**Type of Assessment: Formative**

**SLO: (M -07 -A – 14)** Calculate rate and average rate of quantities.

**Type of Task:** Constructed response

**Level of SLO:** Comprehension

**Task:** Ali went to office from home at 7:50am, and reach office at 9:30. How many does he reach office? **(05) Marks**

**Level of Item:** Comprehension

|  |  |  |
| --- | --- | --- |
| **Expected Response** | **Skill observed** | **Score** |
| Journey time = Arrival time- departure time = 9.30 – 7.50= 1.80 hours | Formula for findingJourney Calculation Answer  | (02) Marks (02) Marks(01) Mark |

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**Domain: A-Numbers and operations**

**Grade: 7**

**Unit: 3. Ratio, Rate and Proportion**

**Type of Assessment: Formative**

**SLO: (M -07 -A – 14)** Calculate rate and average rate of quantities.

**Type of Task:** Constructed response

**Level of SLO:** Comprehension

**Task:** Ali Travel 80KM from Islamabad to Lahore in $2 \frac{1}{2} $ hour. What was his speed for the journey? **(03) Marks**

**Level of Item:** Comprehension

|  |  |  |
| --- | --- | --- |
| **Expected Response** | **Skill observed** | **Score** |
| Speed = $\frac{distance }{time}$$= \frac{80km}{2.5hr}$ $= \frac{80}{\frac{25}{10}}$ = $\frac{800}{25}$= 32 km/h | Formula of SpeedCalculationAnswer | (01) Mark(01) Mark(01) Mark |

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**Domain: A-Numbers and operations**

**Grade: 7**

**Unit: 3. Ratio, Rate and Proportion**

**Type of Assessment: Formative**

**SLO: (M -07 - A – 15)** Calculate increase and decrease in a ratio based on change in quantities.

**Type of Task:** Constructed response

**Level of SLO:** Comprehension

**Task:** Ali can read 8 pages of a book in 10 minutes. How many pages of the book can the ali read in 30 minutes. **(05) Marks**

**Level of Item:** Comprehension

|  |  |  |
| --- | --- | --- |
| **Expected Response** | **Skill observed** | **Score** |
| Pages : Time (mints)8 : 10x : 30$\frac{x}{8}$ = $\frac{30}{10}$$10x= 240$ $x=24 pages$  | Relation between two quantities Comparison of two quantities (Direct proportion)Calculation  | (02) Marks1. Mark

(02) Marks) |

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**Unit: 3. Ratio, Rate and Proportion**

**Type of Assessment: Formative**

**SLO: (M -07- A – 16)** Explain and calculate direct and inverse proportion and solve real -world word problems related to direct and inverse proportion.

**Type of Task:** Constructed response

**Level of SLO:** Comprehension

**Task:** 12 Workers can do a work in 20 days. After 5 days, 6 workers left how many days would the reaming workers take to complete the work? **(05) Marks**

**Level of Item:** Comprehension

|  |  |  |
| --- | --- | --- |
| **Expected Response** | **Skill observed** | **Score** |
| 12 workers can do the work in 20 days. After 6 days.Remaining workers= 12-6=6. The number of workers is inversely Proportional to the number of days workers= days  12 : 15 6 : x $\frac{x}{15}= \frac{12}{6}$  $x=30 days$ | Inverse ProportionFinding remaining quantities Calculation | (02) Marks(02) Mark(01) Marks |

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