**Template for Essay Type Item**

**Subject: Mathematics**

**Domain: D-Geometry**

**Grade: 7**

**Unit: 9. Geometry**

**Type of Assessment: Formative**

**SLO: (M-07-D-01)** Recognize quadrilaterals and their characteristics (parallel sides, equal sides, equal angles, right angles, lines of symmetry etc). (Square, rectangle parallelogram, rhombus, trapezium and kite).

**Type of Task:** Constructed response

**Level of SLO:** Comprehension

**Task:** Calculate unknown angles of the triangles. **(05) Marks**

Ao

49o

45o

**Level of Item:** comprehension

|  |  |  |
| --- | --- | --- |
| **Expected Response** | **Skill observed** | **Score** |
| The sum of the triangle is 180o.A+B+C= 180oA=?, B = 49o , C= 45oA+ 49o + 45o = 180oA+ 94o = 180oA= 180o-94oA= 86o  | 1) Formula 2) Calculation3) Answer | 02 Marks02 Marks01 Mark |

**Name and Signature of Developer**

**Zubair Mustafa**

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

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**Template for Essay Type Item**

**Subject: Mathematics**

**Domain: D-Geometry**

**Grade: 7**

**Unit: 9. Geometry**

**Type of Assessment: Formative**

**SLO: (M-07-D-05)** Describe the properties of a circle: centre, radius, diameter, chord, arcs, major and minor arc, semi – circle and segment of a circle.

**Type of Task:** Constructed response

**Level of SLO:** Comprehension

**Task:** Write the formula (i) radius of the circle (ii) diameter? **(04) Marks**

**Level of Item:** Comprehension

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| **Expected Response** | **Skill observed** | **Score** |
| The distance between the centre of the circle to its circumference is the radius.The diameter is always double the radius.D | Knowledge of the geometry | 04 Marks |

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**Template for Essay Type Item**

**Subject: Mathematics**

**Domain: D-Geometry**

**Grade: 7**

**Unit: 9. Geometry**

**Type of Assessment: Formative**

**SLO: (M-07-D-07)** Understand the relationship between interior and exterior angles of polygons and between opposite interior and exterior angles in a triangle. **(M-07-D-02)** Differentiate between convex and concave polygons.

**Type of Task:** Constructed response

**Level of SLO:** Comprehension

**Task:** Measure the interior angle of a polygon (square). **(05) Marks**

**Level of Item:** Comprehension

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| --- | --- | --- |
| **Expected Response** | **Skill observed** | **Score** |
| Formula is $=\frac{(n-2) 180^{o}}{n}$ $=\frac{(4-2) 180^{o}}{4}$ $=\frac{(2) (180^{o})}{4}$ $=\frac{360^{o}}{4}$  = 90o | 1. Formula
2. Calculation
3. Answer
 | 01 Mark03 Marks01 Mark |

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**Template for Essay Type Item**

**Subject: Mathematics**

**Domain: D-Geometry**

**Grade: 7**

**Unit: 9. Geometry**

**Type of Assessment: Formative**

**SLO: (M-07- D-08)** Calculate the interior and exterior angles of a polygon and the sum of interior angles of a polygon.

**Type of Task:** Constructed response

**Level of SLO:** Comprehension

**Task:** Find the unknown quantity. **(05) Marks**



**Level of Item:** Comprehension

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| --- | --- | --- |
| **Expected Response** | **Skill observed** | **Score** |
| Sum of interior angles of pentagon=$360^{o}$$$102^{o}+120^{o}+100^{o}$$$$108^{o}+180^{o}-x=360^{o}$$$$610^{o}-x=360^{o}$$$$610^{o}-360^{o}=x$$$$250^{o}=x$$ | 1. Formula
2. Calculation
3. Answer
 | (02) Marks(02) Marks(01) Mark |

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**Template for Essay Type Item**

**Subject: Mathematics**

**Domain: D-Geometry**

**Grade: 7**

**Unit: 9. Geometry**

**Type of Assessment: Formative**

**SLO: (M-07-D-06)** Calculate unknown angles in quadrilaterals using the properties of quadrilaterals. (Square, rectangle, parallelogram, rhombus, trapezium and kite). **(M-07- D-09)** Recognize identify and draw lines of symmetry in 2-D shapes and rotate objects using rotational symmetry, and find the order of rotational symmetry.

**Type of Task:** Constructed response

**Level of SLO:** Comprehension

**Task:** Find the value of$ x $ in the following parallelogram. **(05) Marks**



**Level of Item:** Comprehension

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| --- | --- | --- |
| **Expected Response** | **Skill observed** | **Score** |
| Adjacent angles in a parallelogram add up to $180^{o}$$4x+2x$=$180^{o}$$6x$ =$180^{o}$$\frac{6x}{6}$=$\frac{180^{o}}{6}$$$x=30^{o}$$ | 1) Formula 2) Calculation3) Answer | (01) Mark(03) Marks(01) Mark |

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