**Math Grade 6**

**Template for Essay Type Item**

**Subject: Mathematics**

**Domain: D-**Geometry

**Grade: VI**

**Unit 8: Practical Geometry**

**Type of Assessment: Formative**

[SLO: M -06 -D -06] Construct angles of specific measures (30, 45, 60, 75, 90, 105 and 120) and bisect angles using a compass.

Type of Task: Extended response

Level of SLO: Application

Task: Construct an angle of 90o and bisect it.

Maximum Marks: 5

Level of Item: Comprehension

**Expected Response:** **Skill Observed Score**

90o

C

B

A

P

5 cm

Steps of

Construction:

1. Draw AB

5cm long.

1. Construct an

angle of 90o

at point B.

1. ABC is required angle of 90o.
2. Bisect angle ABC with the help of compass.
3. BP is required bisector of angle ABC.

Drawing angle of 90o. 03

Drawing angle bisector 02

1. Given a parallelogram ABCD and its
2. Find mid-point X of BF and Y of CG

**Name and Signature of Developer**

1. Dr Khalid Mahmood
2. Mr. Sardar Habib

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**Name and Signature of Reviewer**

**Template for Multiple Choice Item**

**Subject: Mathematics**

**Domain: D-**Geometry

**Grade: VI**

**Unit 8: Practical Geometry**

**Type of Assessment: Formative**

[SLO: M -06 -D -06] Construct angles of specific measures (30, 45, 60, 75, 90, 105 and 120) and bisect angles using a compass.

Type of Task: MCQ

Level of SLO: Knowledge

Maximum Marks (01)

60o

*x*

2*x*

Task: Unknown angles in a given triangle are:

**Options**

**A**) 50o, 100o

B) 40o, 80o

C) 45o, 90o

D) 35o, 70o

**Answer: B**

**Reason for Choosing Distracter:** All distracters are in the ratio 1 : 2.

**Name and Signature of Developer**

1. Dr Khalid Mahmood
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**Name and Signature of reviewer**

**Template for Essay Type Item**

**Subject: Mathematics**

**Domain: D-**Geometry

**Grade: VI**

**Unit 8: Practical Geometry**

**Type of Assessment: Formative**

[SLO: M -06 -D -06] Construct angles of specific measures (30, 45, 60, 75, 90, 105 and 120) and bisect angles using a compass. Also find unknown angle about a point.

Type of Task: Extended response

Level of SLO: Comprehension

2*x* + 3o

5*x* + 5o

3*x* + 2o

Task: Calculate unknown angles in the adjoining figure.

Figure is not according to scale.

Maximum Marks: 5

Level of Item: Comprehension

**Expected Response:** **Skill Observed Score**

As 2*x* + 3o, 3*x* + 2o and 5*x* + 5o lie about a point.

Therefore, 2*x* + 3o + 3*x* + 2o + 5*x* + 5o = 360o

10*x* + 10o = 360o

10 *x* = 350o

*x* = 35o

Therefore required angles are:

2*x* + 3o = 2 × 35o + 3o = 73o

3*x* + 2o = 3 × 35o + 2o = 107o

5*x* + 5o = 5 × 35o + 5o = 180o

Finding value of *x* 02

Finding three angles 03

**Name and Signature of Developer**

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**Name and Signature of Reviewer**

**Template for Multiple Choice Item**

**Subject: Mathematics**

**Domain: D-**Geometry

**Grade: VI**

**Unit 8: Practical Geometry**

**Type of Assessment: Formative**

[SLO: M-06-D-07] Construct a perpendicular (from a point on the line and outside the line) and a perpendicular bisector.

Type of Task: MCQ

Level of SLO: Knowledge

Maximum Marks (01)

Task: Which of the following is line segment?

**Options**

**A**)

B)

C)

D)

**Answer: C**

**Reason for Choosing Distracter:** Distracters represent rays and line which may confuse students.

**Name and Signature of Developer**

1. Dr Khalid Mahmood
2. Mr. Sardar Habib

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**Name and Signature of reviewer**

**Template for Essay Type Item**

**Subject: Mathematics**

**Domain: D-**Geometry

**Grade: VI**

**Unit 8: Practical Geometry**

**Type of Assessment: Formative**

[SLO: M-06-D-07] Construct a perpendicular (from a point on the line and outside the line) and a perpendicular bisector.

Type of Task: Extended response

Level of SLO: Comprehension

Task: Given a line segment AB 5cm long. Draw a right

bisector of this segment with the help of compass.

Maximum Marks: 5

Level of Item: Comprehension

**Expected Response:** **Skill Observed Score**

C

B

A

5 cm

O

D

Steps of Construction:

1. Draw AB

5cm long.

1. Considering centre A,

open the legs of compass

more than half of AB and

draw an arc.

1. Repeat the procedure with centre B.
2. Both arcs intersect at points C and D.
3. Line CD is required right bisector of AB

passing through mid point O.

Drawing figure 03

Writing steps of construction 02

**Name and Signature of Developer**

1. Dr Khalid Mahmood
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**Name and Signature of Reviewer**

**Template for Essay Type Item**

**Subject: Mathematics**

**Domain: D-**Geometry

**Grade: VI**

**Unit 8: Practical Geometry**

**Type of Assessment: Formative**

[SLO: M-06-D-07] Construct a perpendicular (from a point on the line and outside the line) and a perpendicular bisector.

Type of Task: Extended response

Level of SLO: Comprehension

Task: Given a line segment CD, 6cm long. Take a point P on CD and draw perpendicular on CD through P.

Maximum Marks: 5

Level of Item: Comprehension

### PD

### M

### D

### C

### L

E

C

**Expected Response:** **Skill Observed Score**

Steps of Construction:

1. Draw CD = 6cm
2. Take a point P on CD

and draw an arc passing

through points L and M

lying on CD.

1. With centers L and M, draw arcs

meeting at point E.

1. Draw line EC passing through point P.
2. Line EC is required perpendicular.

Drawing figure 03

Writing steps of construction 02

**Name and Signature of Developer**

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**Subject: Mathematics**

**Domain: D-**Geometry

**Grade: VI**

**Unit 8: Practical Geometry**

**Type of Assessment: Formative**

[SLO: M-06-D-07] Construct a perpendicular (from a point on the line and outside the line) and a perpendicular bisector.

Type of Task: Extended response

Level of SLO: Comprehension

Task: Given a line XY and a point P not lying on line XY. Draw a perpendicular from P on the line XY.

Maximum Marks: 5

Level of Item: Comprehension

**Expected Response:** **Skill Observed Score**

Steps of Construction:

1. Draw a line XY.
2. Take a point P outside the line.
3. With centre P, draw an arc

of radius slightly more

than the distance

between P and line which

1. With centre A and B, draw arcs

intersecting at point O.

Join P to O.

1. PO is the required perpendicular on line XY at

point C.

### P

### Y

### X

### O

### C

### A

### B

Drawing figure 03

Writing steps of construction 02

**Name and Signature of Developer**

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**Name and Signature of Reviewer**