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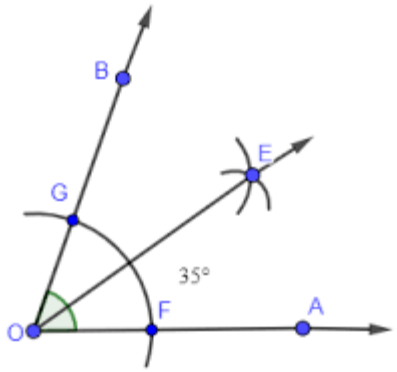
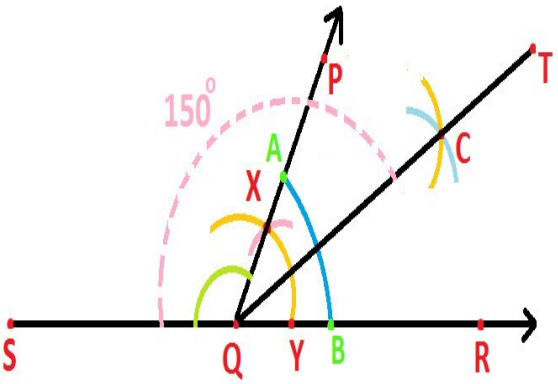
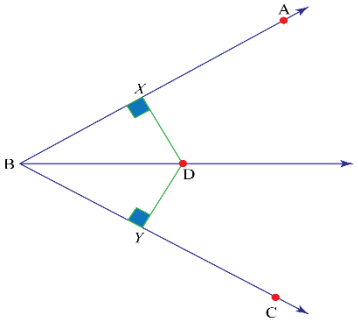
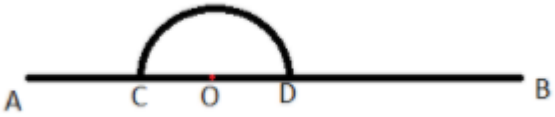
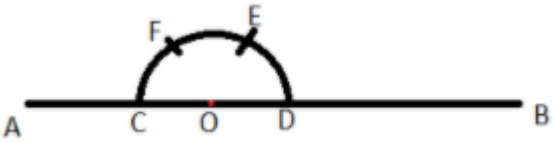
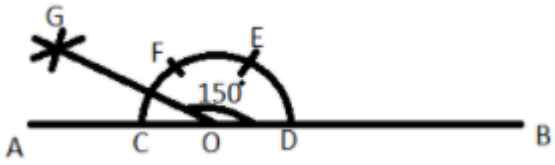
BASIC 8

WEEKLY LESSON PLAN – WEEK 5

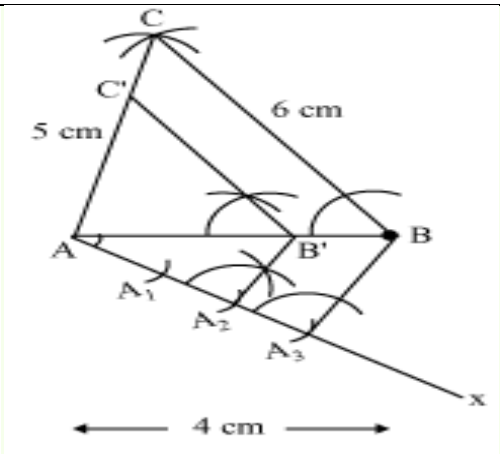
Strand:	Geometry and Measurement		**Sub-Strand:**	Lines and shapes	
Content Standard:	B8.3.1.2 Demonstrate the ability to perform geometric constructions of the angles (75˚, 105˚, 60˚, 135˚ and 150˚), and construct triangles and find locus of points under given conditions				
Indicator (s)	B8.3.1.2.1 Construct and bisect angles of 120˚, 105˚, 135˚ and 150˚ B8.3.1.2.2: Construct scalene triangles, isosceles triangles, equilateral triangles, obtuse-angled triangle, acute-angled triangles in different orientations under given conditions.		**Performance Indicator:** Learners can verify an angle with a protractor.		
Week Ending	05-05-2023				
Class	B.S.8	**Class Size:**		**Duration:**	
Subject	Mathematics				
Reference	Mathematics Curriculum, Teachers Resource Pack, Learners Resource Pack, Textbook.				
Teaching / Learning Resources	Poster, Pictures, Word Chart.		**Core Competencies:**	• Ability to select the most effective creative tools for working and preparedness to give explanations • Imagining and seeing things in a different way	

DAY/DATE	**PHASE 1 : STARTER**	**PHASE 2: MAIN**	**PHASE 3: REFLECTION**
MONDAY **01-05-2023**	Learners brainstorm to identify the six (6) basic constructions	1. Assist learners to use a pair of a compass and a ruler to construct angles of different degrees. 2. Demonstrate how to draw arcs on angles to construct another angle. 3. Learners practice constructing angles from angle by using a pair of compass and a ruler. 4. Assist Learners to verify angles formed by using a protractor. **six basic constructions:** • Copying a line segment. • Copying an angle. • Creating a perpendicular bisector. • Creating an angle bisector. • Creating parallel lines.	Reflect on how to bisect angles to form another angle. **Exercise;** (i) Construct the following angles; a) 70° b) 100° c) 130° d) 124° (ii) Construct the bisector of each of the angles in question 1.

		• Creating a perpendicular line through a given point. **Constructing a 70° angle** **Steps:** 1. Draw a ray AB 2. Using a protractor, measure an angle of 70° at A 3. Placing the compass at A, draw the arc BC 4. With compass on C draw an arc 5. Without changing the width of the compass place, it on B and draw another arc 6. Mark the intersection point G 7. Join B to G 	
TUESDAY **02-05-2023**	Review Learners knowledge on the previous lesson.	1. Assist Learners to use a pair of compasses and a ruler to perform geometric construction of an angle of 150° 2. Learners brainstorm to measure the angle constructed using a Protractor. 3. Assign to small groups of Learners different angle degrees to construct and present to the class.  **Steps to follow to construct a 150°angle;** (i) First draw a horizontal line AB of some appropriate distance as shown below.	Through questions and answers, conclude the lesson. **Exercise;** 1. In the figure below, BD bisects ∠ABC∠  2. Construct a rectangle, ABCD, using the following measurements;

		 (ii) Now draw a semicircle from any point (O) on the line AB with some appropriate radius less than AB, which cuts the line AB at C and D as shown in the below figure.  (iii) Now with same radius mark the arc on the semicircle from point D which cuts the semicircle at point E, now again with same radius mark the arc on the semicircle from point E which cuts the semicircle at point F as shown below.  (iv) Now make an arc from point F with some appropriate distance and again with same distance mark an arc from point C which cuts the previous arc at point G as shown below, then join the points O and G as shown below  So angle GOB is the required 150 angle.	(i) |AB| = 12 cm, |CB| = 4 cm (ii) |AB| = 6 cm, |CB| = 3·5 cm (iii) |AB| = 2·8 cm, |CB| = 6·6 cm
THURSDAY **04-05-2023**	Learners brainstorm to identify the types of Triangles.	1. Assist Learners to use a pair of compass and a ruler to construct an equilateral triangle when a side is given. 2. Learners to practice measuring the size of the angle constructed with a protractor. 3. Demonstrate on how to use a pair of compass and a ruler to perform geometric construction of an isosceles right-angled triangle when the base line is given. 4. Discuss with learners on how to use a pair of compasses and a ruler to perform geometric construction of an isosceles an isosceles triangle when all the sides are given. **Example;**	Reflect on how to construct the various types of triangles. **Exercise;** 1. Construct an equilateral triangle of sides 4 cm. 2. Construct an equilateral triangle of side 5.5 cm. 3. Construct an equilateral triangle ABC with side 7cm.

		Construct triangle with sides 5 cm, 4 cm, and 6 cm. Then construct another triangle whose sides are 23 times the corresponding sides of triangle **Solution** • Step 1 Draw a line segment AB = 4 cm. taking point A as centre, draw an arc of 5 cm radius. Similarly, taking point B as its centre, draw an arc of 6 cm radius. These arcs will intersect each other at point C. Now, AC = 5 cm and BC = 6 cm and ΔABC is the required triangle • Step 2 Draw a ray AX making an acute angle with line AB on the opposite side of vertex C. • Step 3 Locate 3 points A1,A2,A3 (as 3 is greater between 2 and 3) on line AX such that AA1=A1A2=A2A3. • Step 4 Join BA3 and draw a line through A2 parallel to BA3 to intersect AB at point B'. • Step 5 Draw a line through B' parallel to the line BC to intersect AC at C'. ΔAB'C' is the required triangle.	4. Construct an equilateral triangle ABC of side 6 cm. 5. Construct an equilateral triangle with each side 5 cm. Then construct another triangle whose sides are 2/3 times the corresponding sides of ΔABC.

Name of Teacher: ***School:*** ***District:***