More on Constructions

. Choose the Correct Answer:	
1. Which instrument is primarily	used to draw arcs and circles?
a) Protractor	b) Compass
c) Divider	d) Set square
2. A perpendicular bisector of a li	ne segment divides it into:
a) Two equal parts	b) Two unequal parts
c) Three equal parts	d) Right angles
3. The tool used to draw accurate	angles is a:
a) Compass	b) Protractor
c) Ruler	d) Divider
4. A triangle can be constructed v	vhen:
a) Only one side is known	b) Two sides are equal
c) All three sides are known	d) No side is known
5. A line drawn from the vertex of	of a triangle and perpendicular to the opposite
side is called a:	
a) Median	b) Diagonal
c) Angle bicector	d) Altitude

- 1. A line that cuts another line into two equal parts at 90° is called a ______.
- 2. The point where two lines meet is called a _____.
- 3. A triangle with all three sides of different lengths is called a ______ triangle.
- 4. The instrument used to draw equal lengths from a fixed point is the _____.
- 5. An angle greater than 90° but less than 180° is called an _____ angle.

C. Figure out the answers to these questions:

- 1. Construct a line segment of length 7 cm and draw its perpendicular bisector. Mark the midpoint.
- 2. Using ruler and compass, construct an angle of 90° without a protractor. Show all steps clearly.
- 3. Draw a triangle with sides 5 cm, 6 cm, and 7 cm. Label all angles.
- 4. Construct a triangle where two angles are 60° and 50°, and the side between them is 5 cm.

- 5. Draw a line segment and construct a perpendicular from a point above the line to the line.
- 6. Construct an angle of 60° and then bisect it. What is the final angle formed?
- 7. Draw a triangle with one right angle and the other two angles of your choice. Label the type of triangle.
- 8. Construct a triangle with base 6 cm and height 4 cm. Use this to find and shade the area visually.

D. Mark each sentence with a True (\checkmark) or False (X):

- 1. A triangle cannot be constructed if the sum of two sides is less than the third side.
- 2. A compass is used to measure the size of an angle.
- 3. A perpendicular bisector always divides a line segment equally.
- 4. An equilateral triangle has all angles equal to 90°.
- 5. A ruler can be used to draw a perfect circle.

E. Challenge yourself with these questions:

- 1. Draw two angles—one acute and one obtuse—using only compass and ruler.
- 2. Construct a triangle with two equal sides and draw its altitude from the top vertex.
- 3. Create a 60° angle, then show how to draw a line perpendicular to one of its arms.
- 4. Draw a triangle with sides 5 cm, 5 cm, and 6 cm. identify its type and mark all sides.
- 5. Draw a triangle and show its median from one vertex.
- 6. Create a triangle using only a compass and ruler, and shade one of its angles.