



ST. LAWRENCE HIGH SCHOOL

A JESUIT CHRISTIAN MINORITY INSTITUTION



Sub: Algebra and Geometry

Class: 7

Date: 15.03.21

Duration: 40 min

Worksheet Solution 18

Full Marks: 15

BASIC CONSTRUCTION

Choose the correct option:

Q.1) The idea of equal alternate angles is used to construct which of the following?

(a) A line parallel to a given line

- (b) A triangle
- (c) A square
- (d) Two triangles

Q.2) A line p and a point X not on it are given. Which of the following is used to draw a line parallel to p through X ?

(a) Equal corresponding angles.

- (b) Congruent triangles.
- (c) Angle sum property of triangles.
- (d) Pythagoras' theorem.

Q.3) How many perpendicular lines can be drawn to a line from a point not on it?

(a) 1

- (b) 2
- (c) 0
- (d) Infinite

Q.4) Which of the following is NOT constructed using a ruler and a set square?

- (a) A perpendicular to a line from a point not on it.
- (b) A perpendicular bisector of a line segment.
- (c) A perpendicular to a line at a point on the line.
- (d) A line parallel to a given line through a given point**

Q.5) Study the steps of construction given.

Step 1: Draw a ray OA .

Step 2: With O as centre and any convenient radius draw an arc MN to cut OA at M .

Step 3: With M as centre and the same radius draw an arc to cut MN at P .

Step 4: With P as centre and the same radius, draw an arc to cut MN at Q .

Step 5: Draw OQ and produce it to D . An angle AOD is constructed.

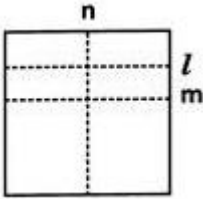
What is the measure of $\angle AOD$?

- (a) 60°
- (b) 30°
- (c) 120°**
- (d) 45°

Q.6) Which of the following is used to draw a line parallel to a given line?

- (a) A protractor
- (b) A set square
- (c) A ruler
- (d) A ruler and compasses**

Q.7) Direction: David folds a sheet of paper. The dotted lines as shown in the figure are the creases formed, which are named as l , m and n .



What can you say about lines l and n ?

- (a) $l \parallel n$
- (b) $l \perp n$**
- (c) l is the same line as n
- (d) Neither [a] nor [b]

Q.8) Which among the following is used to construct a triangle?

- (a) The lengths of the three sides.**
- (b) The perimeter of the triangle.
- (c) The measures of three angles.
- (d) The names of three vertices.

Q.9) Which of the following can be used to construct a 30° angle?

- a) **Construct a 60° angle using compasses and bisect it.**
- b) Construct a perpendicular bisector of a line segment.
- c) Construct the bisector of any angle.
- d) Construct an angle congruent to any given angle.

Q.10)

Satish followed the steps given in the box.

Step 1: Construct an angle of 90° .

Step 2: Bisect the 90° angle.

Step 3: Bisect one of the angles obtained in step 2.

Which steps is not required to construct a 45° angle?

- a) Step 1
- b) Step 2
- c) Step 3**
- d) Steps 2 and 3

Q.11) When copying line segment AB using a straight edge and a compass, the compass should be used to:



- a) Draw an arc above point A
- b) Measure the length of segment AB**
- c) Draw an arc between point A and point B
- d) Measure half the length of line segment AB

Q.12) Suppose we wish to construct a perpendicular bisector of line segment EF . We can correctly begin by placing the compass point on E and marking off the distance to which point?



- a) A**

- b) B
- c) C
- d) D

Q.13) Suppose we wish to construct angle EFG congruent to angle DBC using a compass and straightedge. Which step would be correct to do first?

- a) **Place the compass point at B**
- b) Place the compass point at C
- c) Place the straightedge along A and C
- d) Place the straightedge along C and D

Q.14) When bisecting an angle, the straightedge should be used to:

- a) Mark the point M
- b) Measure the angle AOB
- c) Copy the angle with an arc
- d) **Connect point M and vertex O**

Q.15) Given: angle A

What is the first step in constructing the angle bisector of angle A?

- a) Draw ray AD
- b) Draw a line segment connecting points B and C.
- c) From points B and C, draw equal arcs that intersect at D.
- d) **From point A, draw an arc that intersects the sides of the angle at points B and C.**

