Appendix- V

FORMATIVE CRITERION TESTS
1. Pick the factors of 9 from the numbers 1, 3, 4, 5, 6, 7, 8, 9
2. Write the first ten:
   a) prime numbers
   b) composite numbers
   c) odd composite numbers
3. Find the H.F.C. of 120 and 300.
4. Find the H.C.F. of 1435, 1085 and 2135.
5. Find the L.C.M. of 64, 36 and 80.
6. The H.F.C. of two numbers is 4, their LCM is 24 and one of the numbers is 8. Find the other number.
7. Two numbers are 15 and 55 and their L.C.M. is 165. Find their H.C.F.
8. Fill in the blanks:
   a) $\frac{2}{3} + \frac{2}{3} = $
   b) $\frac{5}{6} - \frac{5}{8} = $
   c) $7 \times \frac{1}{8} = $
   d) $\frac{5}{32}$ of 9 =
   e) $\frac{1}{2}$ of $\frac{1}{5} = $
9. A man has Rs. 150. He gives $\frac{1}{5}$ of his money to his eldest son, $\frac{1}{3}$ of the remaining money to his younger son and the rest to his daughter. How much money did he give to his daughter?
10. There are 800 students in a school. If $\frac{1}{10}$ of the students were absent on a day, find the number of students that were present that day. Also find the fraction of students of that school that was present that day.
11. Find the greatest number that will exactly divide 840 and 2296.
12. H.C.F. of two numbers is 28 and their L.C.M. is 336. If one number is 112, find the other number.
13. Fill in the blanks :-

a) \( \text{L.C.M} \times \text{H.C.F.} = \)

b) \( 0 + \ldots = \frac{1}{11} \)

c) \( 2\frac{3}{7} \div 2\frac{3}{7} = \)

d) The multiplicative inverse of \( \frac{3}{4} \) is.................

14. Simplify

(a) \( \left[ \frac{4}{9} + \frac{7}{9} \right] \times 2\frac{1}{4} \)

(b) \( 3\frac{2}{5} + \left[ 2\frac{1}{3} + 1\frac{5}{7} \right] \)

c) \( \left[ \frac{11}{13} + \frac{2}{7} \right] \text{of} \quad \frac{7}{12} \text{=} \frac{3}{5} \)

15. i) Fill in the blanks :-

a) \( 16 \div 5\frac{1}{3} = \ldots \)

b) \( 12 \div 2\frac{2}{3} = \ldots \)

c) \( \frac{7}{3} \div 14 = \ldots \)

ii) Fill in the blanks

a) \( 2 \times \frac{1}{7} = \frac{1}{7} \times \ldots \)

b) \( \frac{1}{2} \times 0 = \ldots \)

c) \( \left[ \frac{1}{2} \times \frac{1}{3} \right] \times \frac{1}{4} = \ldots \times \left[ \frac{1}{3} \times \frac{1}{4} \right] \)

d) \( \left[ \frac{16}{25} \times \frac{17}{39} \right] \times \ldots = \frac{16}{25} \times \left[ \frac{17}{39} \times \frac{21}{50} \right] \)
1. i) Write the integral part of the following decimal fractions.
   a) 7.1
   b) 12.651
   c) 167.4
   d) 235.678

   ii) Write the fractional parts of the following decimal fractions.
   a) 6.5
   b) 27.35
   c) 175.678
   d) 2929.38387

2. Fill in the blanks.
   a) 36.97 = ------tens + -------ones + —------tenths + —-----hundredth
   b) 412.356 = ----------hundreds + —— tens +--------- ones
   +----------tenths +-------— hundredths + -■--------thousand this.

3. Write as a decimal fraction.
   a) $5 + \frac{4}{10} + \frac{2}{100} = \text{---------------------}$
   b) $60 + 7 + \frac{0}{10} + \frac{1}{100} + \frac{9}{1000} = \text{---------------------}$
   c) $0 + \frac{2}{10} + \frac{3}{100} + \frac{6}{1000} = \text{---------------------}$
   d) 6 tens + 2 ones + 7 tenths
   e) 0 tens + 1 tenth + 3 hundredths + 4 thousands = -------

4. i) Choose the like and unlike decimal fractions from the following pairs.
   a) 12.6, 7.5
   b) 4.67, 0.79
   c) 67.123, 923.0123
   d) 116.234, 17.004

   ii) Convert the following pairs of unlike decimal fractions into pairs of like decimal fractions.
   a) 3.4, 8.23
   b) 4.04, 4.4
   c) 70.1, 345.123
   d) 300.001, 91.01

5. Write in ascending order.
   a) 2.01, 2.001, 2.003, 2.004
   b) 345.05, 34.08, 345.009 and 123.123
6. i) Express the following decimal fractions as fractional number: 
   a) .1 
   b) .23 
   c) .357 
   d) 5.4567 
   e) 12.05 

ii) Write the following fractional numbers as decimal fractions. 
   a) 9/10 
   b) 11/100 
   c) 17/1000 
   d) 31/1000 
   e) 3 19/100 

7. i) Add the following decimal fractions. 
   a) 0.275 and 0.425 
   b) 39.101, 0.064 and 471.98 

ii) Find 
   a) 56.813 - 28.202 
   b) 400Kg - 150.650 Kg. 

8. Fill in the blanks 
   a) 0.2 x 4 = --------- 
   b) 13.5 x 17 = --------- 
   c) 1.67895 x 1000 = --------- 
   d) 89.015 x 10 = --------- 
   e) 7.5 x 5.7 = --------- 
   f) 60.72 ÷ 12 = --------- 
   g) 16.578 ÷ 5.4 = --------- 
   h) 7.1 ÷ 100 = --------- 
   i) 9.2 ÷ 1000 = --------- 
   j) 36.48 ÷ 20 = --------- 

9. John gets Rs. 3.75 and Sabir gets Rs. 4.25 every day as pocket-money. In 7 days how much more money than John does Sabir gets? 

10. If 8.75 m of cloths costs Rs. 420, find the cost of one metre of the cloth. Also find the cost of 3.5 m of the same cloth.
1. Fill in the blanks.
   a) A thermometer is used for measuring ____________ of object.
   b) Clinical thermometers are marked in ____________ scale.
   c) The normal body temperature is ____________.
   d) Freezing point of water is ____________.
   e) The temperature of the body of a patient is measured with a ____________ thermometer.

2. Convert the temperature given below into Celcius Scale.
   a) 122°F
   b) 39°F
   c) 72°F
   d) 122.9°F

3. The body temperature of a patient is 5.4°F above the normal temperature. What is his body temperature in °C?

4. Fill in the blanks
   1) The average of 2 and 4 is ____________.
   2) The average of Rs. 30 and Rs. 40 is ____________.
   3) To find the average of 7, 8 and 9 we divide ____________ by 3.
   4) To find the average of 35 kg, 41 kg and 56 kg we divide 132 kg by ____________.
   5) Average = sum of quantities ____________.

5. Sanjiv secured the following marks in an examination:

<table>
<thead>
<tr>
<th>Hindi</th>
<th>English</th>
<th>Maths</th>
<th>Science</th>
<th>Drawing</th>
</tr>
</thead>
<tbody>
<tr>
<td>65</td>
<td>78</td>
<td>98</td>
<td>92</td>
<td>82</td>
</tr>
</tbody>
</table>

   a) Find the average of marks.
   b) In how many subjects were the marks higher than the average marks?
   c) In how many subjects were the marks lower than the average marks.

6. The following bar chart shows the runs scored in the six overs bowled by a spinner in a cricket match.
a) How many runs were scored in second over.
b) How many overs were there in which no runs were scored.
c) What was the total number of runs scored in six overs.
d) What was the average runs scored in six overs?

7. In a class, 20 students are 1.15 m tall, 15 students are 1.20 m tall and 5 students are 1.2 m tall. What was the average height of the students in the class?

8. The rainfall recorded in a town was as follows:
   May - 8.45 cm   Aug. - 12.42
   June - 0 cm     Sep. - 11.58
   July - 0 cm

   Find the average rainfall during these five months.

9. a) The ratio of 10 and 15 =
b) The ratio of 12 g and 18 g =
c) The ratio of 65 and 39 =
d) The ratio of Re 1 and 60P =
e) The ratio of Rs. 15 and Rs. 40 =

10. Is the ratio 16 : 24 equal to the ratio 22 : 33?

11. Madhavi secured 75 marks while Radha secured 45 marks? What is the ratio of the marks?

12. If a car travel 150 km in 5 hrs, find its speed.

13. Find the speed of a train which leaves Secundrabad at 7 p.m. and reaches Bhopal next day at 6 a.m. If stops for 1 hour on the way. The distance between secundrabad and Bhopal.

14. A train runs at the speed of 75 km/per hr. How much time will it take to cover 225 Km?

15. Find the distance between two stations if a train travelling non stop at 75km/hr covers the distance between the stations in 20 minute.
1. Fill in the blanks.
   a) A___________ has only one end point.
   b) A___________ has no end point.
   c) A___________ has two end points.
   d) The symbol of straight line AB is ____________.
   e) The symbol of line segment AB is ____________.

2. Name all pair of adjacent angles in each of the following figure.
   ![Diagram]

3. Name all pairs of vertically opposite angles in each of the following figure.
   ![Diagram]

4. Write the measure of complementary angles of the angles of a following measures.
   a) 30°
   b) 60°
   c) 70°
   d) 85°
   e) 20°

5. Choose pair of supplementary angles.
   a) 75°, 105°
   b) 170°, 10°
   c) 210°, 30°
   d) 120°, 60°
   e) 60°, 30°
   f) 160°, 20°
   g) 76°, 14°
   h) 145°, 35°

6. a) Compute the diameter of the circle whose radius is 7 cm.
   b) Compute the radius of the circle whose diameter is 16 cm.

7. Fill in the blanks.
   a) A triangle has ___________ sides.
   b) A triangle has ___________ angles.
   c) A triangle has ___________ vertices.
   d) All sides of a scalene triangle are ___________.
   e) All sides of an equilateral.
8. Compute the measure of the angle A in each of the following figure.

![Figures with angles](image)

9. In which of the following cases is the construction of a triangle ABC possible?
   
a) $AB = 3 \text{ cm}$ $BC = 4 \text{ cm}$ $CA = 1 \text{ cm}$
   
b) $AB = 9 \text{ cm}$ $BC = 4 \text{ cm}$ $CA = 3 \text{ cm}$
   
c) $AB = 10 \text{ cm}$ $BC = 7 \text{ cm}$ $CA = 8 \text{ cm}$
   
d) $AB = 5 \text{ cm}$ $BC = 7 \text{ cm}$ $CA = 8 \text{ cm}$
   
e) $AB = 6 \text{ cm}$ $BC = 6 \text{ cm}$ $CA = 7 \text{ cm}$

10. Name the type of triangle in which
   
a) all sides are equal ________,
   
b) two sides are equal ________,
   
c) All sides are equal ________.

11. Fill in the blanks with 'obtuse angled' 'acute angled' or 'right angled'.
   
a) If in the $\triangle ABC$, $\angle A = 60^\circ$ and $\angle C = 30^\circ$ then the triangle is ________.
   
b) If in $\triangle PQR$, $\angle P = 50^\circ$ and $\angle R = 20^\circ$, then the triangle is ________.
   
c) If in $\triangle L MN$, $\angle L = 74^\circ$ and $\angle N = 25^\circ$, then the triangle is ________.

12. Fill in the blanks :
   
a) A triangle is called equilateral if ___________.
   
b) A triangle is called isosceles if ___________.
   
c) A triangle is called scalene if ___________.
   
d) A triangle is called right - angled if ___________.

13. Write true or false
   
a) A $\triangle$ can have two acute angles
   
b) A $\triangle$ can have two obtuse angles
   
c) A $\triangle$ can have two right angles.
   
d) A $\triangle$ can have one obtuse angle and one right angle.
   
e) A $\triangle$ can have all its angles acute.

14. Draw an angle of $60^\circ$. By dividing it into two equal parts draw an angle of $30^\circ$.

15. Construct a $\triangle ABC$ in which $BC = 7 \text{ cm}$, $CA = 5 \text{ cm}$, $AB = 3 \text{ cm}$.

16. Construct an $\triangle$ equilateral triangle in which each side is 5.7 cm.

17. Construct a right angled triangle $ABC$ in which $\angle B = 90^\circ$, $BC = 5 \text{ cm}$ and $AB = 4 \text{ cm}$.
1. Fill in the blanks.
   a) A quadrilateral has ________ sides.
   b) A quadrilateral has ________ vertices.
   c) A quadrilateral has ________ angles.
   d) A quadrilateral has ________ diagonals.
   e) The sum of the angles of a quadrilateral is ________.

2. In the quadrilateral ABCD, A = 120°, B = 100° and C = 60°. Find the measure of D.

3. ABCD is a parallelogram. Now fill in the blanks.
   \[ D \]
   \[ C \]
   \[ A \]
   \[ B \]
   a) AB is parallel to ________
   b) AD is ________ to BC.
   c) The four angles of the parallelogram are ________, ________, ________, and ________
   d) Two diagonals of the parallelogram are ________ and ________
   e) The four sides of the parallelogram are ________.

4. PQRS is a rectangle. Now fill in the blanks ________
   a) \( \angle P = \) ________ degree.
   b) The measures of \( \angle R \) is ________
   c) PQ is parallel to ________
   d) PS is ________ to QR.
   e) The diagonals of PQRS intersect at ________.

5. Fill in the blanks ________
   a) All sides of a square are ________
   b) Each angle of a square has the measure ________ degrees.
   c) A parallelogram whose all sides are equal is called a ________
   d) A quadrilateral in which only one pair of opposite sides are parallel is called a ________

6. Fill in the blanks ________
   a) All sides of a rhombus are ________
   b) Opposite sides of rhombus are ________
   c) A trapezium has two of its sides ________
   d) The diagonals of a rhombus intersect at ________ degree.

7. The given figure is a closed shape ABCDE, bounded by five line segments. How many triangles are formed by joining A to the other vertices. Also find the sum of the measure of the angles of the figure.
   \[ A \]
   \[ B \]
   \[ C \]
   \[ D \]
   \[ E \]
8. Find the area of a rectangle which is 123 cm long and 70 cm broad.
9. Find the area in square meters of a square whose side is 500 cm.
10. Find the length of a playground whose area is 513 sq. and breadth is 19 m.
11. Find the breadth of a rectangle whose area is 2 sq. m and length is 200 cm.
12. A field is 140 m long and 36 m broad. Labourers are engaged to plough the field. If a labourer can plough 120 sq m a day. How many labourers are to be engaged to plough the field in a day?
13. Find the volume of a cube whose each edge is 5 cm long.
14. Find the volume of a cuboid whose length, breadth and height are 0.7 m, 0.5 and 0.9 m respectively.
15. How many bricks each 25 cm long, 10 cm wide and 7.5 cm thick well be required for a wall 20 m long 2 m high and 75 m thick? If bricks sell at Rs. 900 per thousand, what will it cost to build the wall?
16. Fill in the blanks:
   a) All sides of a cube are ____________.
   b) Volume of a cube is ____________.
   c) Volume of a cuboid is ____________.
   d) 1000 m = ____________.
   e) 100 cm = ____________.