

MONDAY

1. Prove that “The lengths of tangents drawn from an external point to a circle are equal”.
2. Solve the PLE by elimination method: $x + 2y = 20$ and $x - y = 5$
3. Solve the QE by factorization method: $x^2 + 10x + 21 = 0$
4. Solve the QE using the formula: $x^2 - 7x + 12 = 0$
5. Find the area of a triangle with vertices (1, 1), (2, 3) and (4, 5).
6. Find the 25th term of the AP: 3,5,7,9. . .
7. Construct a triangle of sides 5cm, 6cm and 7cm and then another triangle similar to it whose sides are $\frac{2}{3}$ of the corresponding sides of the first triangle.
8. Draw a circle of radius 4 cm. From a point 8 cm away from its centre, construct the pair of tangents to the circle and measure their lengths.
9. Find the mean of the following frequency distribution:

Class Interval	0-10	10-20	20-30	30-40	40-50
Frequency	7	5	10	12	6

10. Draw an ogive by more than method for the following data:

Class Interval	100-200	200-300	300-400	400-500	500-600
Frequency	8	12	15	10	5

TUESDAY

1. State and prove Thales theorem.
2. Solve the PLE by elimination method: $x + y = 8$ and $2x + y = 13$
3. Solve the QE by factorization method: $x^2 - 11x + 30 = 0$
4. Solve the QE using the formula: $x^2 - 2x - 4 = 0$
5. Find the coordinates of the point which divides the line segment (-6,10) and (3,-8) internally in the ratio 2:7.
6. How many three-digit numbers are divisible by 7 ?
7. Construct a triangle of sides 4cm, 5cm and 6cm and then another triangle similar to it whose sides are $\frac{3}{2}$ of the corresponding sides of the first triangle.
8. Draw a pair of tangents to a circle of radius 5 cm which are inclined to each other at an angle of 60° .
9. Solve graphically : $x + y = 7$ and $x - y = 3$
10. Find the median of the following frequency distribution:

Class Interval	0-20	20-40	40-60	60-80	80-100
Frequency	6	11	17	12	4

WEDNESDAY

1. State and prove Pythagoras Theorem.
2. Solve the PLE by elimination method: $x + y = 3$ and $2x + 5y = 12$
3. Solve the QE by factorization method: $2x^2 - 5x + 3 = 0$
4. Solve the QE using the formula: $x^2 - 4x + 2 = 0$
5. In what ratio does the point (2,6) divide the line segment joining the points (-2,2) and (3,7) ?
6. Which term of the AP 21, 42, 63, 84, . . . is 420?
7. Construct a triangle of sides 3cm, 4cm and 5cm and then another triangle similar to it whose sides are $\frac{2}{5}$ of the corresponding sides of the first triangle.
8. Draw a circle of radius 3 cm. From a point 7 cm away from its centre, construct the pair of tangents to the circle and measure their lengths.
9. Find the mode of the following frequency distribution:

Class Interval	0-10	10-20	20-30	30-40	40-50
Frequency	5	12	20	9	4

10. Draw an ogive by less than method for the following data:

Class Interval	100-120	120-140	140-160	160-180	180-200
Frequency	12	14	8	6	10

THURSDAY

1. Prove that “The tangents at any point of a circle are perpendicular to the radius through the point of contact”.
2. Solve the PLE by elimination method: $2x + 3y = 12$ and $3x + 2y = 13$
3. Determine the nature of roots for the given QE: $x^2 - 4x + 4 = 0$
4. Solve the QE using the formula: $x^2 + 15x + 50 = 0$
5. Find the area of a triangle with vertices (2, 3), (-1, 0) and (2, 4).
6. The sum of the 4th and 8th terms of an AP is 24 and the sum of the 6th and 10th terms is 44. Find the first three terms of the AP.
7. Draw a triangle ABC with side BC = 6cm, AB = 5cm and $\angle B = 60^\circ$. Then construct a triangle whose sides are $\frac{3}{4}$ of the corresponding sides of the triangle ABC.
8. Draw a pair of tangents to a circle of radius 4.5 cm which are inclined to each other at an angle of 80° .
9. Solve graphically: $2x - y = 8$ and $x - y = 2$
10. Find the mean of the following frequency distribution:

Class Interval	0-4	4-8	8-12	12-16	16-20
Frequency	4	5	12	5	4

FRIDAY

1. Prove that “The ratios of the areas of two similar triangles are equal to the square of the ratio of their corresponding sides”.
2. Solve the PLE by elimination method: $2x - y = 5$ and $x + 3y = 6$
3. Solve the QE by factorization method: $x^2 + 2x - 10 = 0$
4. Solve the QE using the formula: $2x^2 - 3x - 5 = 0$
5. Find the value of x , if the distance between the points $(x, -1)$ and $(3, 2)$ is 5 units.
6. How many terms are there in the sequence 3, 6, 9, 12, . . . , 111?
7. Construct a triangle of sides 4.5cm, 5.4cm and 6.3cm and then another triangle similar to it whose sides are $\frac{3}{2}$ of the corresponding sides of the first triangle.
8. Draw a circle of radius 3.5 cm. From a point 7 cm away from its centre, construct the pair of tangents to the circle and measure their lengths.
9. Find the median of the following frequency distribution:

Class Interval	0-20	20-40	40-60	60-80	80-100
Frequency	5	6	12	10	7

10. Draw an ogive by more than method for the following data:

Class Interval	250-260	260-270	270-280	280-290	290-300
Frequency	8	10	15	9	12

SATURDAY

1. Prove that “If corresponding angles of two triangles are equal, then the ratios of their corresponding sides are equal”.
2. Solve the PLE by elimination method: $3x + 2y = 8$ and $2x - y = 3$
3. Discuss the nature of roots for the given QE: $3x^2 - 4x - 10 = 0$
4. Solve the QE using the formula: $x^2 - 4x - 8 = 0$
5. Prove that the points $(-2, 5)$, $(0, 1)$ and $(2, -3)$ are collinear.
6. The sum of 5th and 9th terms of an AP is 72 and the sum of 7th and 12th terms 97. Find AP
7. Construct a triangle of sides 5cm, 6cm and 7cm and then another triangle similar to it whose sides are $\frac{3}{7}$ of the corresponding sides of the first triangle.
8. Draw a pair of tangents to a circle of radius 4.7 cm which are inclined to each other at an angle of 75° .
9. Solve graphically: $x + y = 10$ and $x - y = 4$
10. Find the mode of the following frequency distribution:

Class Interval	0-10	10-20	20-30	30-40	40-50
Frequency	5	6	12	10	7

SUNDAY

1. State and Prove Thales theorem
2. State and Prove Pythagoras theorem.
3. Solve the PLE by elimination method: $2x + y = 10$ and $2x - y = 2$
4. Solve the QE by factorization method: $x^2 - x - 20 = 0$
5. Solve the QE using the formula: $x^2 + 4x + 10 = 0$
6. Discuss the nature of roots for the given QE: $2x^2 - 8x + 8 = 0$
7. In an AP $a=2$, $d=8$, $S_n=90$, Find n and a_n .
8. Find the area of a triangle with vertices $(3, 2)$, $(11, 8)$ and $(8, 12)$.
9. Check whether $(5,-2)$, $(6,4)$ and $(7,-2)$ are the vertices of an isosceles triangle.
10. In what ratio does the point $(-4,6)$ divide the line segment joining the points $(-6,10)$ and $(3,-8)$?
11. Construct a triangle of sides 5cm, 6cm and 7cm and then another triangle similar to it whose sides are $\frac{4}{3}$ of the corresponding sides of the first triangle.
12. Draw a circle of radius 4 cm. From a point 7cm away from its centre, construct the pair of tangents to the circle and measure their lengths.
13. Solve graphically: $x + y = 7$ and $x - y = 1$
14. Draw an ogive by less than method and more than method for the following data:

Class Interval	500-550	550-600	600-650	650-700	700-750
Frequency	12	15	25	10	8

15. Find the mean, median and mode of the following frequency distribution:

Class Interval	0-10	10-20	20-30	30-40	40-50
Frequency	3	5	9	5	3

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