D. A. V. PUBLIC SCHOOLS, ODISHA ZONE
QUESTION BANK

SUB: MATHEMATICS **CLASS VIII (2023-24)**

TEXT BOOK: 1. SECONDARY MATHEMATICS-8 (DAV CMC PIUBIVATION)

2. NCERT EXAMPLAR MATHEMATICS -8

EXAM SCHEDULE-2023-24

NAME OF THE EXAM	DATE	FULL MARKS
PERIODIC ASSESSMENT-1	24-JULY 2023 TO 31 JULY 2023	40

SYLLABUS

CHAPTER	PERIODIC ASSESSMENT-1	MARKS (40)
Chapter-1	Squares and square roots	10
Chapter-2	Cubes and Cube roots	06
Chapter-4	Direct and Inverse variation	10
Chapter-10	Parallel lines	14

TYPOLOGY OF QUESTIONS

1	MULTIPLE CHOICE QUESTION	1 MARK
2	VERY SHORT ANSWER TYPE QUESTION	1 MARK
3	ASSERTION AND REASONING BASED QUESTION	1 MARK
4	SHORT ANSWER TYPE QUESTION-1	2 MARKS
5	SHORT ANSWER TYPE QUESTION-1I	3 MARKS
6	CASE STUDY BASED QUESTION.	4 MARKS
7	LONG ANSWER TYPE QUESTION.	5 MARKS

CH-1: SQUARES AND SQUARE ROOTS.

MCQ QUESTIONS (1 MARK EACH)

CHOOSE THE APPROPRIATE ANSWER FROM THE GIVEN OPTIONS:

1. The value of $\frac{3}{\sqrt{0.09}}$ is:

   a. $\frac{1}{10}$ b. $\frac{3}{10}$ c. 1   d. 10

2. $\sqrt{0.0025} \times \sqrt{2.25} \times \sqrt{0.0001}$ equal to:

   a. 0.00075   b.0.0075   c.0.075   d. 0.00075

3. A man plants 15129 pine trees in a park and arranged them so that there are as many rows as there are pine trees in each row, then the number of rows is:

   (a) 124   (b) 125   (c) 122   (d) 123

4. The least perfect square number which is divisible by 10, 12, 15, 18 is:

   (a)3600   (b) 900   (c) 1600   (d) 2500

5. $\sqrt{110\frac{1}{4}}$ is equal to:

   (a) 10.25   (b) 10.5   (c) 10.45   (d) 10.75

6. Assertion and Reasoning Questions:

Direction: In the following questions, a statement of Assertion (A) is followed by a statement of Reason (R). Mark the correct choice as:

(a) Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A).

(b) Both Assertion (A) and Reason (R) are true but Reason (R) is not the correct explanation of Assertion (A).

(c) Assertion (A) is true but Reason (R) is false.

(d) Assertion (A) is false but Reason (R) is true.

a) Assertion (A): The perfect square number out of 2, 3, 4 and 5 is 4.
   Reasons (R): A perfect square is a number that can be expressed as the product of an integer by itself or as the second exponent of an integer.

b) Assertion (A): 7828 is a perfect square number.
   Reasons (R): A perfect square is a number that can be expressed as the product of an integer by itself or as the second exponent of an integer.

c) Assertion (A): Natural numbers lie between 12^2 and 13^2 are 24.
   Reasons (R): Natural numbers are the positive integers or non-negative integers which start from 1 and ends at infinity.

d) Assertion (A): The unit digit in the square of the number 2644 is 4
   Reasons (R): Units digit of a number is the digit in the one's place of the number. i.e. it is the rightmost digit of the number.

e) Assertion (A): If $25^2 = 625$, then the square root of 625 is 125.
   Reasons (R): The square root is the number that we need to multiply by itself to get the original number.

FILL IN THE BLANKS (1 MARK EACH)

7. The smallest number with which 45 must be multiplied to make it a perfect square is_____.

8. If $7^2 = 49$ and $0.7^2 = 0.49$, then $0.007^2 =$_____.

9. If $a = 2b$ and $b = 4c$, then $\sqrt{\dfrac{a^2}{16bc}} =$_____.

10. The least number which must be added to 1200 so that the sum is a perfect square is_____.

11. If the area of a square plot is $6561 m^2$, then the length of its diagonal is _____.

VERY SHORT ANSWER TYPE QUESTIONS: (1 MARK EACH)

12. Find the value of $\sqrt{117^2 - 108^2}$.

13. Simplify: $\left(\dfrac{1}{2}\right)^2 + \sqrt{0.25}$.

14. Find the side of a square whose area is $6889\ m^2$.

15. If a number ends with 3 zeroes, how many zeroes will its square have?

16. How many non- square numbers lie between 65^2 and 67^2?

SA-I QUESTIONS (2 MARKS EACH)
DO AS DIRECTED:

17. Find the smallest number by which 3150 be divided, so that the quotient is a perfect square.

18. Evaluate: $\sqrt{1\dfrac{4}{5} \times 14\dfrac{21}{44} \times 2\dfrac{7}{55}}$.

19. If Find the value of $\sqrt{9216}$ and use this value to calculate $\sqrt{92.16} + \sqrt{0.9216}$.

20. Without adding find the value of 1+3+5+7+9+11+13+15+17+19+21+23+25+27.

21. Find the greatest number of 3 digits which is a perfect square.

SA-II QUESTIONS (3 MARKS EACH)
ANSWER THE FOLLOWING QUESTIONS:
22. If one number of a Pythagorean triplet is 37, then find the other two numbers.
23. Find the square root of 683.95 correct to 3 decimal places.
24. What should be subtracted from 6249 to get a perfect square number? What is this perfect square number? Also, find its square root.
25. A number is multiplied by half of itself and then 32 is added to the product. If the final number is 130, then find the original number.
26. Find the square root of 12.567025 by long division method.

CASE STUCY BASED QUESTIONS (attend any four out of five sub-parts)
27. Rita wanted to design a square box having an area 2704 m^2.She went to the market and purchase a large card board sheet. She had to cut the card board for making the square box.

Square

Based on the above case study answer the following questions.
I.   The length of each side of the square will be:
      a. 42cm   b. 52cm   c. 62cm   d. 72cm
II.   The perimeter of the square box is:
      a. 208cm   b. 168cm   c. 248cm   d. 288cm
III. If Rima wants to apply coloured ribbon on all across the box, then the quantity she needs to find is:
      a. side   b. area   c. breadth   d. perimeter.
IV.   What is the formula to calculate the area of a square?
      a. 2 × side   b. $side^2$ c. 4× side   d. side + side.
V.   If the cost of applying ribbon all across the box is Rs5 per cm then the total amount spent on applying ribbon is:
      a. Rs 1120   b. Rs1040   c. Rs 1240   d. Rs1440

LA QUESTIONS (5 MARKS EACH)
SOLVE AND FIND A SOLUTION:
28. There is a certain number of chairs in a room. The number of chairs in each row is thrice the total number of rows. Find the number of chairs in each row and the number of rows in the room if the total number of chairs is 2187.
29. Find the value of $\sqrt{1191.16 + 70\sqrt{129.96}}$.

30. Find x if $\sqrt{1369} + \sqrt{0.0615 + x} = 37.25$.

31. If $\sqrt{2} = 1.414$, $\sqrt{3} = 1.732$ and $\sqrt{5} = 2.236$ then find the value of $\sqrt{72} + \sqrt{48} - \sqrt{5}$.

32. The area of a square field is 5184 m^2. A rectangular field whose length is twice its breadth, has its perimeter equal to the perimeter of the square field. Find the area of rectangular field.

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CH-2: CUBE AND CUBE ROOTS

MCQ QUESTIONS (1 MARK EACH)
CHOOSE THE APPROPRIATE ANSWER FROM THE GIVEN OPTIONS:

1. The least possible value of x for which $90 \times x$ is a perfect cube.

    a. 200   b. 300   c. 500   d. 600

2. $\sqrt[3]{5 - \frac{10}{27}}$ is equal to:

    a. $\frac{4}{3}$ b. $\frac{3}{4}$ c. $\frac{5}{3}$ d. $\frac{3}{5}$

3. If n leaves a remainder 1 when divided by 2, then n^3 leaves a remainder of:

    (a) 1   (b) 2   (c) 0   (d) 3

4. If a and b are whole numbers such that $a^b = 512$, where $a > b$
    and $1 < b < 4$, then $\sqrt[b]{a} =$____.

    (a)   (b) 3   (c) 4   (d) 8

5. $\sqrt[3]{1 + 3 + 5 + 7 \pm - - -53} =$ ___.

    (a) 11   (b) 13   (c) 7   (d) 9

6. Assertion reasoning questions:

Direction: In the following questions, a statement of Assertion (A) is followed by a statement of Reason (R). Mark the correct choice as:

(a) Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A).

(b) Both Assertion (A) and Reason (R) are true but Reason (R) is not the correct explanation of Assertion (A).

(c) Assertion (A) is true but Reason (R) is false.

(d) Assertion (A) is false but Reason (R) is true.

    i.   Assertion (A): 125 is a perfect cube
         Reasons (R): The perfect cube is the result of multiplying the same integer three times.

   ii.   Assertion (A): The smallest number by which the number 108 must be multiplied to obtain a perfect cube is 3.
         Reasons (R): The perfect cube is the result of multiplying the same integer three times.

  iii.   Assertion (A): The smallest number by which the number 375 must be divided to obtain a perfect cube is 3.

         Reasons (R): The perfect cube is the result of multiplying the same integer three times.

   iv.   Assertion (A): The cube of an odd natural number is odd
         Reasons (R): A cube number is a number multiplied by itself 3 times

    v.   Assertion (A): The one's digit of the cube of the number 111 is 2
         Reasons (R): A cube number is a number multiplied by itself 3 times

FILL IN THE BLANKS (1 MARK EACH)

7. If a number ends in two 9's, then its cube ends in _____ number of nine.

8. The least number to be subtracted from 220 so that it becomes perfect cube is_____.

9. If $\frac{\sqrt[3]{0.512}}{x} = \sqrt[3]{1000000}$ then the value of x is_____.

10. The cube of 1.01 is _____.

11. There are _____ perfect cubes between 1 and 1000.

VERY SHORT ANSWER TYPE QUESTIONS: (1 MARK EACH)

12. Find the value of: $\sqrt[3]{49} \times \sqrt[3]{-189}$.

13. Two numbers are in the ratio 2 : 3. The sum of their cubes is 35. Find the numbers.

14. Find the value of $\sqrt[3]{\dfrac{-2187}{81}}$.

15. If one side of a cube is 13 metres, then find its volume.

16. If $m^3 + 1 = 10649$ then find m.

SA-I QUESTIONS (2 MARKS EACH)
DO AS DIRECTED:

17. Evaluate: $\sqrt[3]{\dfrac{3^6 \times 4^3 \times 2^9}{8^6 \times 2^6}}$

18. Find the smallest number by which 17496 must be divided, so that the quotient is a perfect cube.

19. If $x^3 = 891$ and $y^3 = 1089$ then find xy.

20. If $A = \sqrt[3]{27} + \sqrt[3]{0.008}$ then find $\dfrac{A^3}{4}$.

21. Check whether -17576 is a perfect cube or not.

SA-II QUESTIONS (3 MARKS EACH)

ANSWER THE FOLLOWING QUESTIONS:

22. By what least number should 1372 be multiplied so that the product is a perfect cube. Also find the cube root of the product so obtained.

23. If the cube root of 175616 is 56 then find the value of:
$\sqrt[3]{175.616} + \sqrt[3]{0.175616} + \sqrt[3]{0.000175616}$.

24. If $\left(\dfrac{4}{7}\right)^3 \div x = \dfrac{16}{49}$ then find x.

25. If $5^{n+2} = 625$ then find $\sqrt[3]{n + 727}$.

26. Evaluate: $\sqrt[3]{\dfrac{216}{729}} \div \sqrt{\dfrac{36}{729}} + \dfrac{1}{2}$.

CASE STUCY BASED QUESTIONS (attend any four out of five sub-parts)

27. A school decided to award prizes for three values-discipline, cleanliness and regularity in attendance. The number of students getting prizes are in the ratio 2 : 3 : 4. The product of the number of students getting prizes is 192.

Based on the above case study answer the following questions.

VI. The number of students getting prizes in discipline is:
   a. 2   b. 4   c. 6   d. 8

VII. The total cost of the prizes for cleanliness, if the cost of each prize is Rs. 200 is:
   a. 600   b. 800   c. 1200   d. 1800

VIII. Find the least number to be multiplied to 192 to make it a perfect cube.
   a. 2   b. 4   c. 9   d. 6

IX. Find the least number to be divided by 192 to make it a perfect cube.
   a. 3   b. 4   c. 12   d. 8

X. If the product of the students is 648 instead of 192 then the number of students getting prizes for regular attendance is:
   a. 8   b. 12   c. 16   d. 18

LA QUESTIONS (5 MARKS EACH)
SOLVE AND FIND A SOLUTION:

28. Three numbers are in the ratio 3 : 4 : 5. The sum of their cubes is 27000. Find the numbers. Also find the difference of the cubes of the largest and the smallest number.

29. Evaluate: $\sqrt[3]{968} \times \sqrt[3]{1375} \times \sqrt[3]{392} \times \sqrt[3]{448}$.

30. Find the cube of 5 numbers of the form $3n + 1$ and verify that their cubes are also in the same form.

31. Neelima makes a cuboid of cardboard of sides 5 cm, 2 cm, 5 cm. How many such cuboids will she need to form a cube. Also find the length of the side of the cube.

32. Check if 2304 is a perfect cube or not. If not find the least number to be multiplied with it so that the product is a perfect cube. Also find the cube root of the product by estimation.

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CH-4: DIRECT AND INVERSE VARIATION

MCQ QUESTIONS (1 MARK EACH)
CHOOSE THE APPROPRIATE ANSWER FROM THE GIVEN OPTIONS:

1. 14 pumps of equal capacity can fill a tank in 6 days. If the tank has to be filled in 4 days, the number of extra pumps needed is:
   a. 7   b. 14   c. 21   d. 28

2. If 20 men working together can finish a job in 20 days, then the number of days taken by 25 men of the same capacity to finish the job is:
   a. 25   b. 20   c. 16   d. 12

3. In a library 136 copies of a certain book required a self-length of 3.4 metres. How many copies of the same book would occupy a self-length of 5.1 metres.
   (a) 205   (b) 204   (c) 205   (d) 216

4. If 12 metre of a uniform iron rod weighs 42 kg. What will be the weight of 6 m of the same rod?
   (a) 20 kg   (b) 21 kg   (c) 84 kg   (d) 42 kg

5. Time taken to cover a distance by a car and the speed of the car are said to be in:
   (a) direct variation   (b) inverse variation   (c) variation   (d) none

6. Assertion Reasoning questions.

Direction: In the following questions, a statement of Assertion (A) is followed by a statement of Reason (R). Mark the correct choice as:

(a) Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A).

(b) Both Assertion (A) and Reason (R) are true but Reason (R) is not the correct explanation of Assertion (A).
(c) Assertion (A) is true but Reason (R) is false.
(d) Assertion (A) is false but Reason (R) is true.

a) Assertion (A): 10 metres of cloth cost Rs 1000. 4 metres costs Rs 400
    Reasons (R): A direct proportion shows the direct the relation between two quantities.
b) Assertion (A): 15 men can mow 40 hectares of land in 1 day. 6 men mow in 1 day=16 hectares
    Reasons (R): A direct proportion shows the direct the relation between two quantities.
c) Assertion (A): The fare for a journey of 40 km is Rs 25. Then 64 km can be travelled for Rs40
    Reasons (R): A direct proportion shows the direct the relation between two quantities. An inverse proportion shows inverse or indirect relation between two quantities
d) Assertion (A): If x = ky and when y = 4, x = 8 then k = 4
    Reasons (R): A direct proportion shows the direct the relation between two quantities. An inverse proportion shows inverse or indirect relation between two quantities
e) Assertion (A): If x = 20 and y = 40, then x and y are inversely proportional.
    Reasons (R): A direct proportion shows the direct the relation between two quantities. An inverse proportion shows inverse or indirect relation between two quantities

FILL IN THE BLANKS (1 MARK EACH)

7. If 15 toys cost Rs.234, then 35 toys will cost_____.
8. x and y are in direct variation. If $y = 10$, then $x = 5$, when $x = 10$ then the value of $y =$_____.
9. If y varies inversely as x and if $y = 4$ when $x = 72$, then the value of the constant of variation is_____.
10. Circumference of a circle varies directly as the diameter and the constant of variation is _____.
11. $3y - 4x = 0$ is a case of _____ variation.

VERY SHORT ANSWER TYPE QUESTIONS: (1 MARK EACH)

12. If 20 bars of soap weigh 5 kg, then find the weight of 4 bars of same soap pieces.
13. If the cost of x metres of wire is Rs.d, then find the cost of y metres of the same wire.
14. If m is inversely proportional to n, and if $m = 0.02$ when $n = 5$, find m when $n = 0.2$.
15. A bus covers a distance of 210 km in 3 hours. Find the speed of the bus.
16. A train running at a speed of 90 km/hr, crosses a pole in 10 seconds. Find the length of the train.

SA-I QUESTIONS (2 MARKS EACH)

DO AS DIRECTED:
17. A train moving at a speed of 60 km/hr covers a certain distance in 7.5 hrs. What should be the speed of the train to cover the same distance in 6 hrs?
18. An electric pole 14 metres high, casts a shadow of 10 metres. Find the height of a tree that casts a shadow of 15 metres under similar condition.
19. If x and y vary directly with each other then find the missing values of x and y in the following table.

x	20	17	____
y	____	34	28

20. A loaded truck travels 14 km in 25 minutes. If the speed remains same, how far can it travel in 5 hours?
21. If a varies inversely as $b + 2$ and if $a = 8$ when $b = 1.5$, find a when $b = 5$.

SA-II QUESTIONS (3 MARKS EACH)
ANSWER THE FOLLOWING QUESTIONS:

22. In a factory, 600 men had a provisions for 180 days. After 40 days, 100 men left the fort. For how many days the remaining provision will lasts?

23. Raajan has enough money to buy 30 cycles worth Rs.600 each. How many cycles will he be able to buy if the cost of each cycle increases by Rs.150?

24. Deepak bought 12 oranges for Rs.7.20. Vimal bought x oranges more than Deepak's for Rs.9.60. Then find the value of x.

25. 28 pumps can empty a reservoir in 18 hours. In how many hours can 42 such pumps do the same work?

26. 11 men can dig a trench $6\frac{3}{4}$ m long in one day. How many men should be employed for digging a trench of same type of 27 m long in one day?

CASE STUCY BASED QUESTIONS (attend any four out of five sub-parts)

27. Priyanka starts her journey to a certain place by car at 9:00 am and reaches the place 1:00 pm if she drives at a speed of 30 km/hr.

Based on the above case study answer the following questions.

    I.   Time taken by Priyanka to reach her destination is:
        a. 2 hrs   b. 3 hrs   c. 1 hr   d. 4 hrs

    II.   The total distance travelled by Priyanka is:
        a. 90 km   b. 60 km   c. 30 km   d. 120 km

    III.   By how much she should increase her speed so that she can reach the place by 12 Noon?
        a. 40 km/hr   b. 20 km/hr   c. 10 km/hr   d. 30 km/hr.

    IV.   If two quantities x and y varies directly with each other then:
        a. $\frac{x}{y}$ remains constant   b. $(x + y)$ remains constant
        c. $(x - y)$ remains constant   d. xy remains constant

    V.   If x and y vary inversely with each other and $x = 10$ when $y = 6$. Find y when $x = 15$.
        a. 4   b. 5   c. 6   d. 10

LA QUESTIONS (5 MARKS EACH)

SOLVE AND FIND A SOLUTION:

28. If 1800 persons can finish the construction of a building in 40 days, how many more persons are required to complete the construction of the building In 24 days? If 600 more men will join the work then in how many days they will construct the building?

29. A train travelling at 90 km/hr crosses a bridge in 80 seconds. If the length of the bridge is 800 m, what is the length of the train.

30. A train 300 m long crosses a 500 m long bridge in 40 seconds. Find the speed of the train.

31. A train passes a platform 330 m long in 40 seconds and a man standing on the platform in 18 seconds. Find:
    i. the length of the train.
    ii.the speed of the train in km/hr.

32. A train 300 m long is running at a speed of 72 km/hr. Find:
    i.   Time taken by it to cross a signal post.
    ii.   The time taken by it to cross a tunnel 450 m long.

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CH-10: PARALLEL LINES.

MCQ TYPE (1 MARK EACH)
Choose the correct option.

1. In the given figure, MN ∥ SP. The measure of ∠1 is equal to-
   (a) 50°   (b) 70°   (c) 90°   (d) 60°
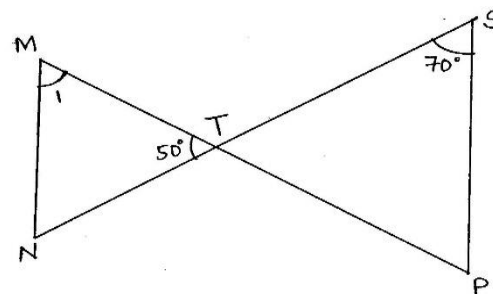
2. In the figure l ∥ m and t is a transversal.
   If ∠1= 45° then ∠x is-
   (a) 45°   (b) 90°   (c) 135°   (d) 145°
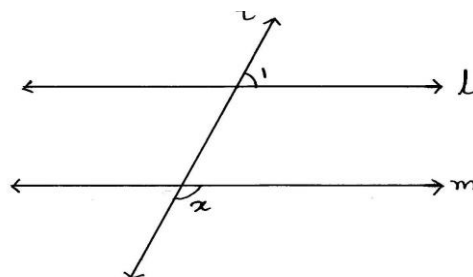
3. l, m, n are lines such that m⊥l and n⊥l, then –
   (a) m⊥ n   (b) m∥ l   (c) m ∥ n   (d) n ∥ l

4. If two parallel lines are cut by a transversal then which of the following is not true.
   (a) Pairs of corresponding angles are equal
   (b) Pairs of alternate interior angles are equal
   (c) Interior angles on the same side of the transversal are supplementary.
   (d) none of these

5. In the figure, PQ ∥ TS , ∠QRS = 60°, and x – y = 30°. The measure of y will be _____ .
   (a) 45°   (b) 15°   (c) 20°   (d) 30°
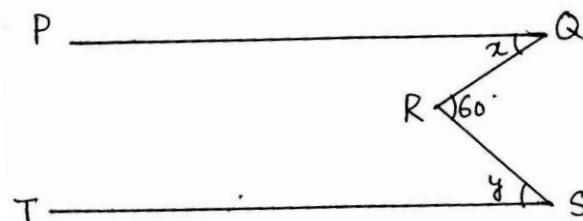
FILL IN THE FOLLOWING BLANKS: (1 MARK EACH)

6. In the figure, EF ∥ GD. AF ∥ EG, AD ∥ BC and ∠DCG = 100°.
   If ∠CDG = 40°, then the measure of ∠AEF = _____
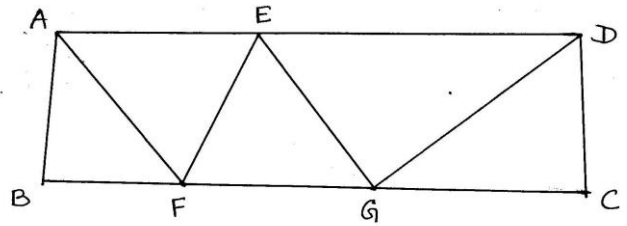
7. Lines which are parallel to the same given line are _____ to each other.

8. If a transversal intersects a pair of parallel lines then each pair of corresponding angles are _____.

9. If a transversal intersects two lines such that any one pair of corresponding angles is equal, then the lines are _____

10. In the figure, if m ∥ n then the value of x is _____
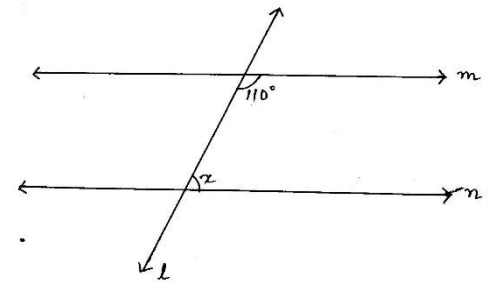
VERY SHORT ANSWER TYPE QUESTIONS (1 MARK EACH)

11. In the figure, if AB ∥ CD then find ∠EFD.
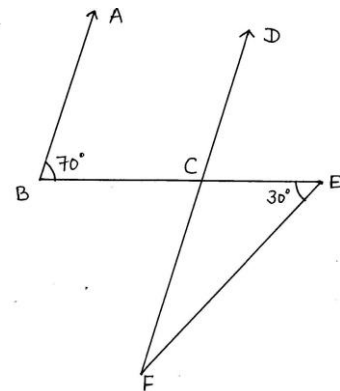
12. In the figure, if l ∥ m, then find the value of x.
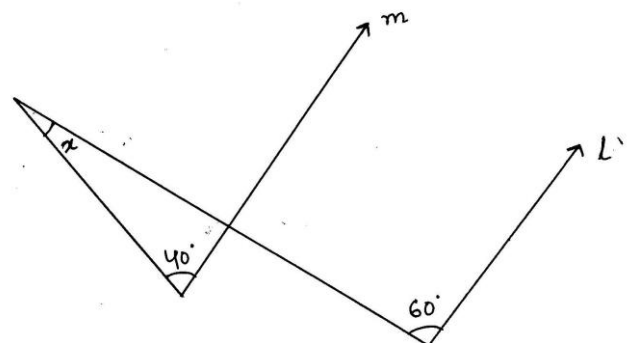
13. In the figure, for what value of y will the lines l and m be parallel to each other.
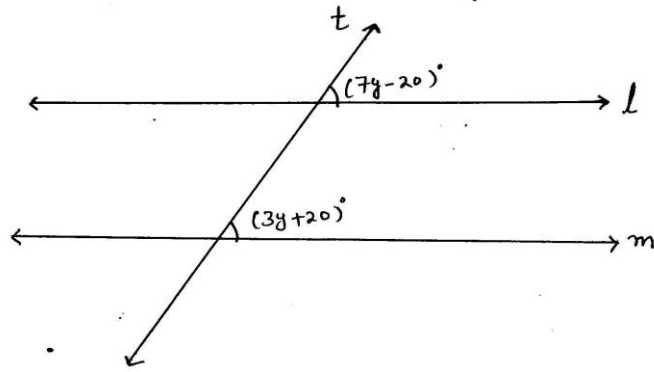
14. In the figure, if line p is parallel to line q, then find the value of x.
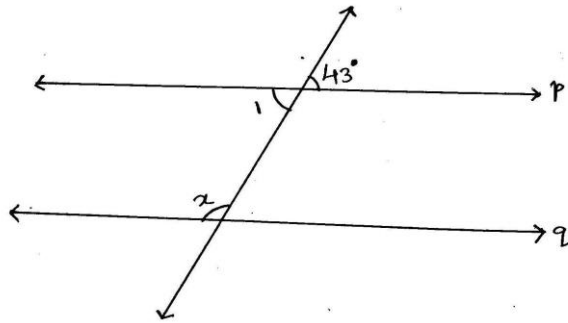
15. In the figure, for what value of x, l ‖ m ?
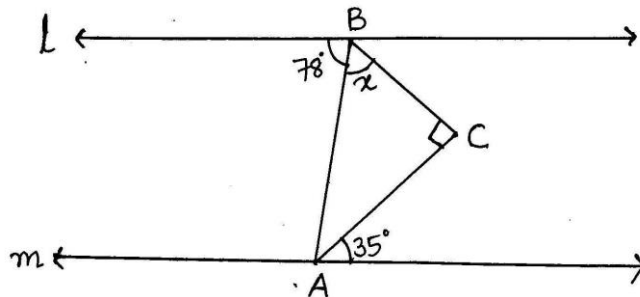
SA- I (2 marks)

16. In the figure, if AB ‖ CD, ∠APQ = 50° and ∠PRD = 127°, find x and y.
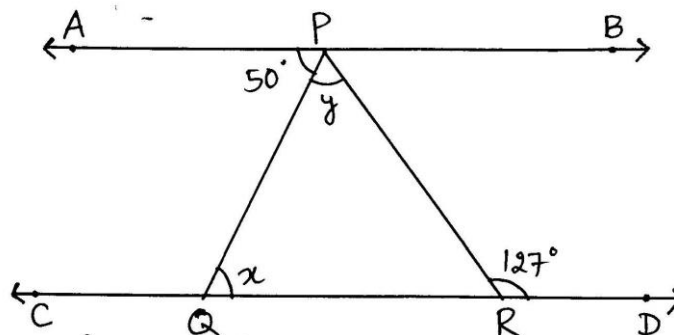
17. In the figure, PQ ‖ RS and ∠PXM= 50° and ∠MYS = 120°. Find the value of x.
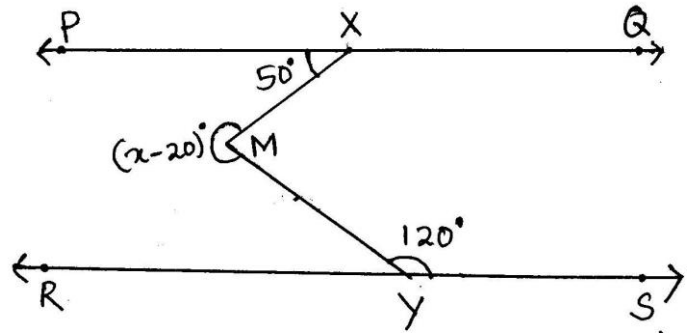
18. In the figure, if l ‖ m, n ‖ p and ∠1 = 85° . Find ∠2 .
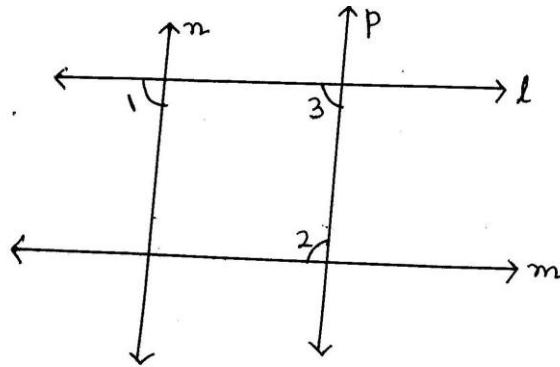
19. In the figure, AB ‖ CD and ∠F = 30° , find ∠ECD.
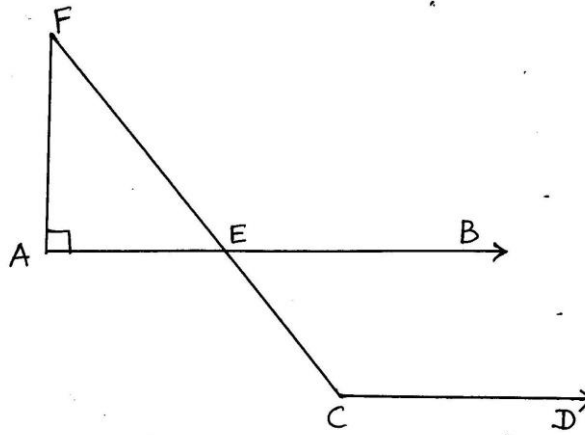
20. In the figure, l ‖ m. and ∠1 : ∠2 = 2 : 4. Find ∠3 and ∠4.
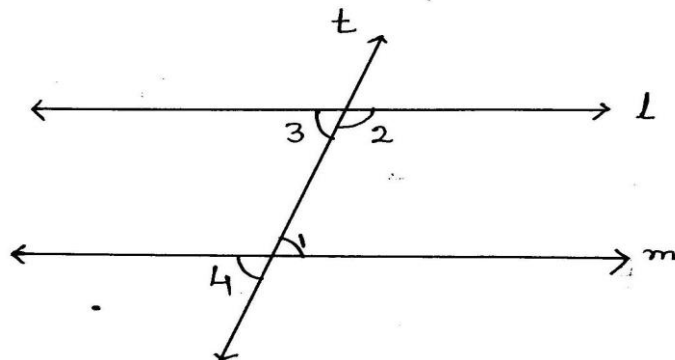
21. In the figure, x = y and a = b. Prove that l ∥ n.
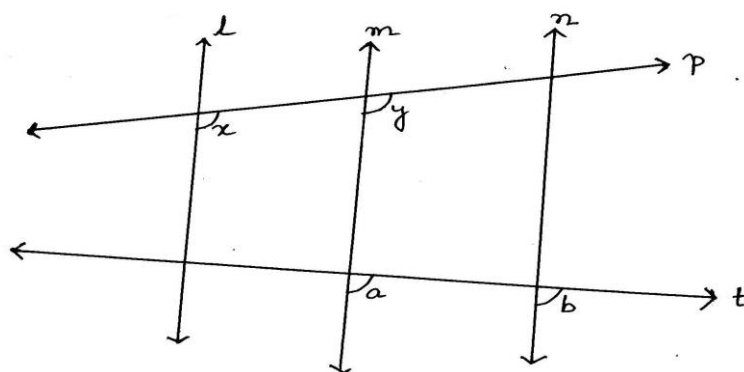
22. In the figure, if AB ∥ CD, CD ∥ EF and y : z = 3 : 7, find x.
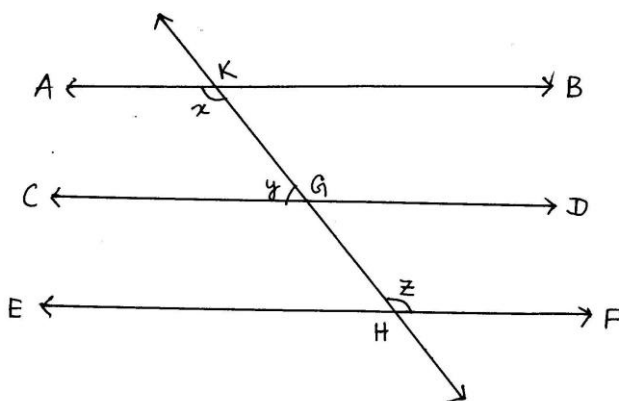
23. In the figure, if AB ∥ CD, EF ⊥ CD and ∠GED = 126° . Find ∠AGE , ∠GEF and ∠FGE.
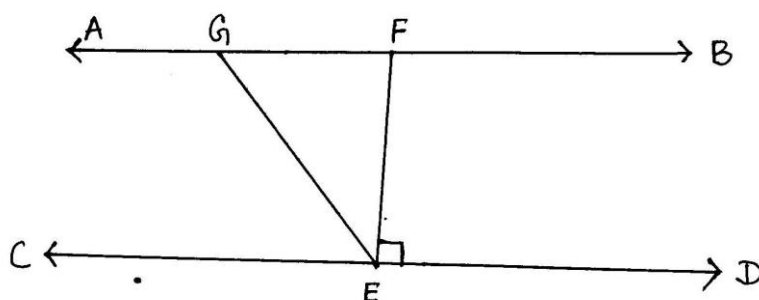
24. In the figure, AB ∥ CD. Find the value of x.
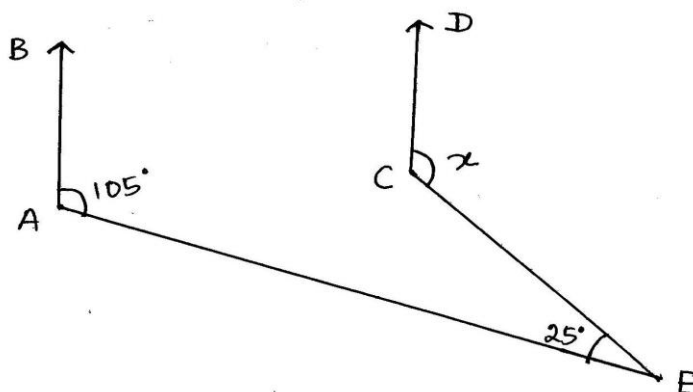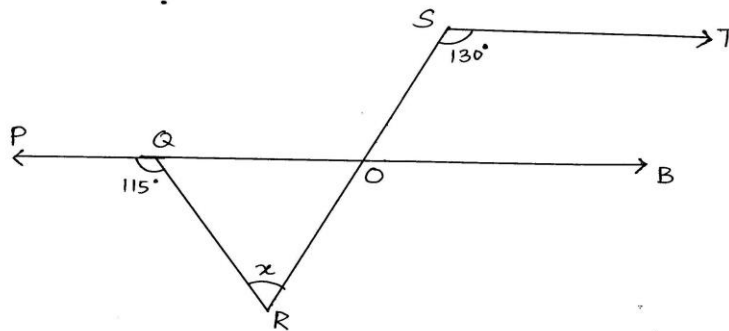
25. In the figure, AB ∥ CD. Prove that a + b – c = 180°.
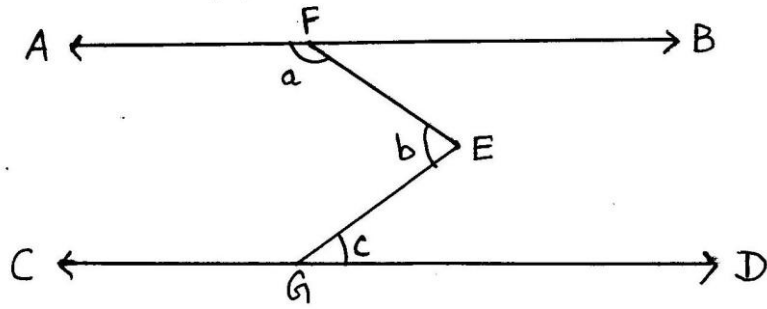
LA (5 marks)

26. If two parallel lines are intersected by a transversal, prove that the bisectors of two pairs of interior angles form a rectangle.
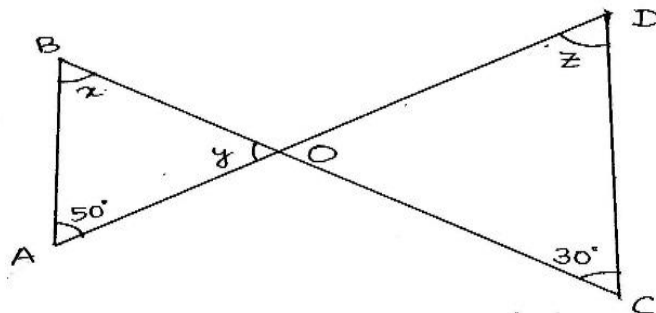
27. In the figure, PQ ⊥ PS, PQ ∥ SR, ∠SQR = 28° and ∠QRT = 65°, then find the value of x , y.
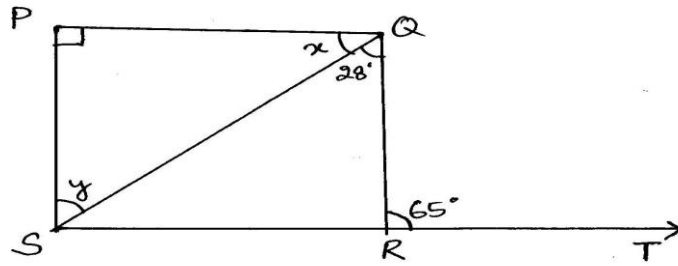
28. In the figure, if PQ ∥ ST, ∠PQR = 115° and ∠RST = 130°. Find the value of x.

29. In the figure, AB ∥ CD . find the values of x , y and z.

30. Draw a line segment PQ of length 6.8 cm. Find a point R on it such that PR = 2/3 RQ.

Assertion reasoning type questions   (1 mark)

Direction: In each of the question given below there are two statements marked as Assertion (A) and Reason (R). Mark your answer as per the codes given below.
i) Both assertion and reason are true and reason is the correct explanation of assertion.
ii) Both assertion and reason are true but reason is not the correct explanation of assertion.
iii) Assertion is true but reason is false
iv) Assertion is false but reason is true

31. **Assertion:** In the given figure, l and m are parallel to each other, then x= 10°.
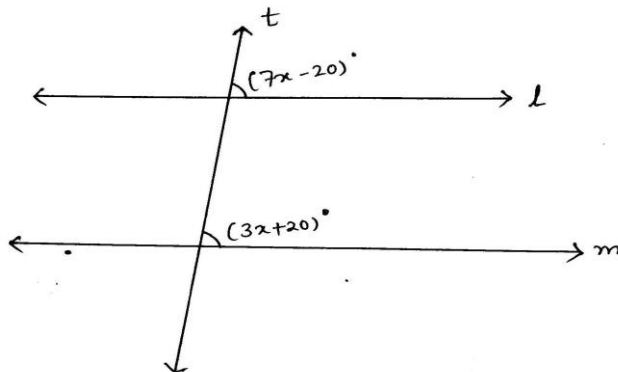
Reason: If a transversal intersects two parallel lines, then each pair of corresponding angles are equal.

32. A: Two lines are parallel if the sum of the co-interior angles made with the transversal is equal to 180 degrees.

   R: Two distinct lines cannot have more than one point in common.

33. A: If a transversal intersects two lines such that a pair of corresponding angles is equal , then the two lines are parallel to each other.

   R: If two lines intersect each other, then the vertically opposite angles are equal.

Case based Questions (1x4)

34. Reeta and Rohan were playing a game on parallel lines and angles formed with the transversal line . First Reeta drew a straight line AB , then Rohan drew another straight line CD parallel to AB. Further a tranverse line PQ was drawn which intersects lines AB and CD at points X and Y respectively.
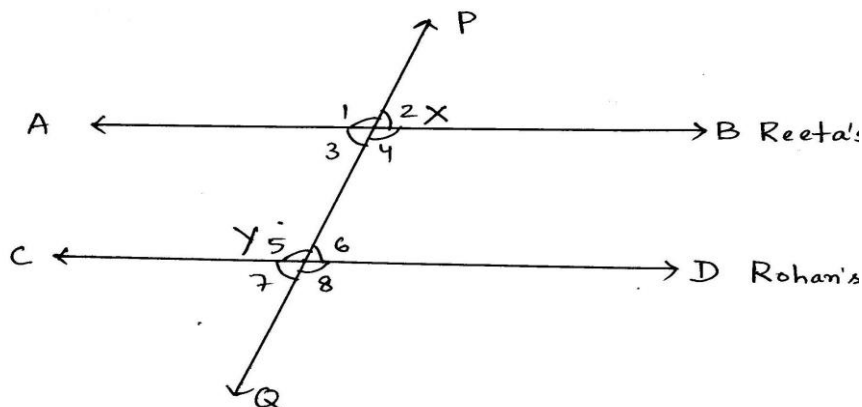
Based on the above paragraph answer these questions:

i) Which is the alternate interior angle to ∠6 ?

   a. ∠1   b. ∠2   c. ∠3   d. ∠4

ii) Which is the corresponding angle to ∠1 ?

   a. ∠4   b. ∠5   c. ∠6   d. ∠7

iii) If ∠4 = 120° then what is the measure of ∠6 ?

   a. 80°   b. 120°   c. 100°   d. 60°

iv) What is the sum of ∠3 and ∠5 ?

   a. 180°   b. 160°   c. 100°   d. 60°

v) ∠5 is equal to which of the following pair of angles?

   a. ∠7 and ∠8   b. ∠6 and ∠7

   c. ∠4 and ∠8   d. ∠1 and ∠3

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