## General Instructions:

- This question paper consists of 5 sections A, B, C, D and E.
- Section-A has 6 questions of 1 mark each.
- Section- B has 1 question on case study of 4 marks.
- Section- C: Question No. 8 to 11 are very short answer type questions of 2 marks each.
- Section-D: Questions No. 12 to 15 are short answer type questions of 3 marks each.
- Section-E: Questions No. 16 and 17 are long answer type questions of 5 marks each.
- Please write the serial number of questions before attempting it.
- In questions of construction, the drawing should be neat, clean and exactly as per given measurements. Use ruler and compasses only.

Section-A (1 x 6 = 6)

Choose the correct option.

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

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

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

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

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

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

4. 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

5. l, m, n are lines such that $m \perp l$ and $n \perp l$, then –

   (a) $m \perp n$ (b) $m \parallel l$ (c) $m \parallel n$ (d) $n \parallel l$

6. **Direction:** In the question given below there are two statements marked as Assertion (A) and Reason (R).

Mark your answer as per the codes given below.

(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.

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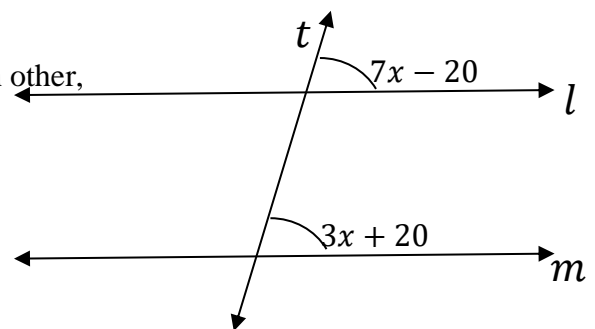
   Reason: If a transversal intersects two parallel lines, then each pair of
       corresponding angles are equal.

Section-B (Case based questions) (1 x 4 = 4)

7. 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, answer the following questions.

i. How does speed and time vary with each other?

(a) Direct   (b) Inverse   (c) Both direct and inverse   (d) None.

ii. Speed can be measured by:

(a) $\dfrac{Distance}{Time}$ (b) $Distance \times Time$ (c) $\dfrac{Time}{Distance}$ (d) None

iii. Find the speed of train in km/hr.

OR

Find the length of the train if it takes 2 minutes to cross a pole.

Section-C   (2 x 4 = 8)

8. What is the smallest number by which 1375 must be divided so that the quotient is a perfect cube.

9. If 12 women can weave 15 metres of cloth in a day, how many metres of cloth can be woven by 20 women in a day.

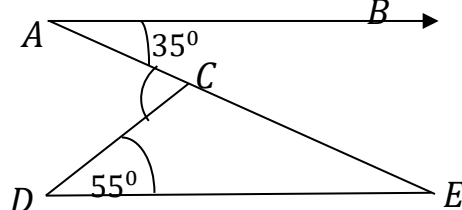10. In the given figure, for what value of x, line l is parallel to line m?
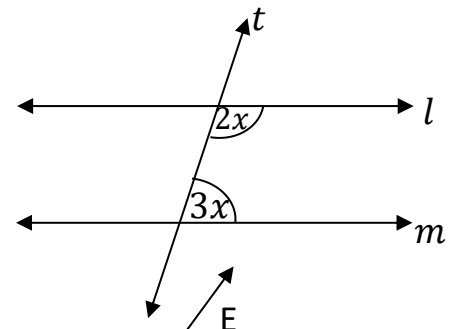
11. In the given figure, $\angle A = 75^0$ and $CE \parallel AB$. If $\angle ECD = 40^0$,

find the other two angles of triangle ABC.
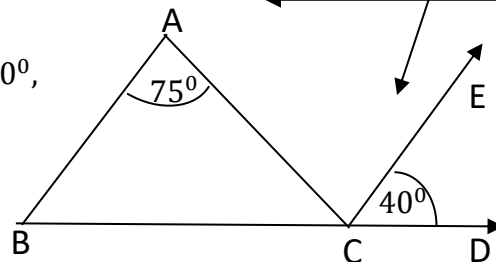
OR

In the figure, if AB ∥DE, find ∠ACD.

Section-D   (3 x 4 = 12)

12. A hall has a capacity of 2704 seats. If the number of rows is equal to the number of seats in each row, then find the number of seats in each row.

<div align="center">OR</div>

   Three numbers are in the ratio 2 : 3 : 5, the sum of whose squares is 608. Find the numbers.

13. Find the cube root of 1728 by prime factorisation method.

14. A train 400m long is running at a speed of 72 km/hr. How much time does it take to cross a   telegraph post?

15. Draw a line segment AB of length 6.5 cm and divide it internally in the ratio 2: 3.

Section-E   (2 x 5 = 10)

16. If $\sqrt{2} = 1.414$, $\sqrt{3} = 1.732$ and $\sqrt{5} = 2.236$ then find the value of $\sqrt{72} + \sqrt{48} + \sqrt{50}$.
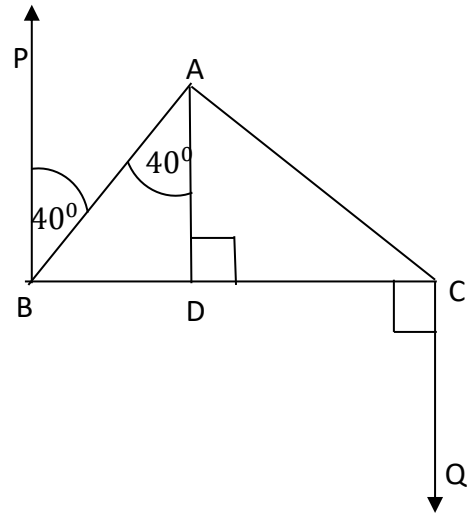
<div align="center">OR</div>

   Write a Pythagorean triplet whose first number is 12.

17. In the given figure, ABC is a triangle and AD ⊥ BC and

   QC⊥ BC. Show that:

   i. PB ∥ AD

   ii. CQ ∥ AD

   iii. PB ∥ CQ.

<div align="center">****END****</div>

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CLASS: VIII
SAMPLE PAPER-2
PERIODIC ASSESSMENT-I (2023-24)
SUB: MATHEMATICS

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TIME: 1 HR 30 MINS   **MAX. MARKS: 40**

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Section-A (1 x 6 = 6)

Answer the following questions.

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

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

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

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

3. If n leaves a remainder 1 when divided by 2, then n^3 leaves a remainder of:
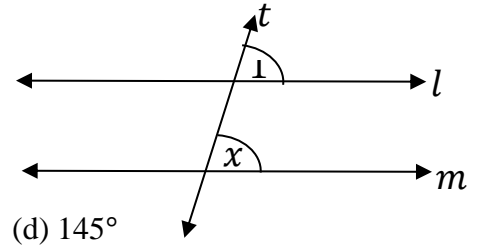
    (a) 1   (b) 2   (c) 0   (d) 3

4. If 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. In the figure $l \parallel m$ and t is a transversal. If $\angle 1 = 45°$ then $\angle x$ is:

    (a) 45°   (b) 90°   (c) 135°   (d) 145°

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:

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(b)Both assertion (A) and reason (R) are true but reason (R) is not the correct explanation of assertion (A).
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Assertion: If two interior angles on the same side of a transversal intersecting two parallel lines are in the ratio 5 : 4, then the greater of the two angles is 100^0 .

Reason: If a transversal intersects two parallel lines, then the sum of the interior angles on the same side of the transversal is 180^0.

Section-B (Case study based questions)   (1 x 4 = 4)

7. A farmer had a rectangular garden as shown in the figure. He has a different type of tree, plants and flower plants in his garden. In his garden there are 2 mango trees A and B tied with a rope of length 10 m. Similarly, he has also 2 Ashoka trees at the same distance of 10 m at C and D as shown in the picture. X and Y are 2 Guava trees planted in the garden. If X and Y are tied by a rope which intersect the two parallel ropes at P and Q respectively. $\angle AOX = 120^0$.
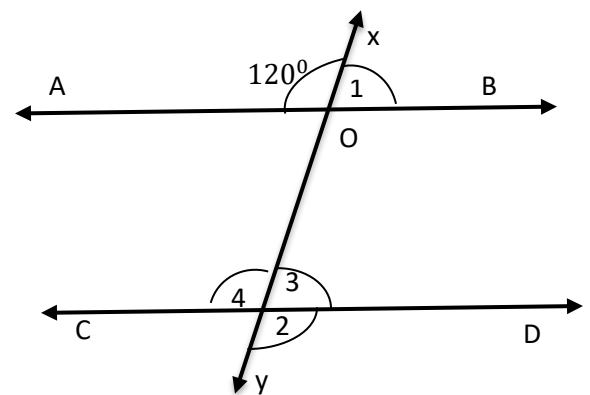
Based on the above, answer the following questions.

i. The measure of $\angle 1$ is:

      (a) 120^0 (b) 60^0 (c) 180^0 (d) none

ii. The measure of $\angle 2$ is:

      (a) 120^0 (b) 60^0 (c) 180^0 (d) none

iii. If $\angle 3 = 2x + 10$, find x.

<div align="center">OR</div>

  If $\angle 4 = 2y - 30$, find y.
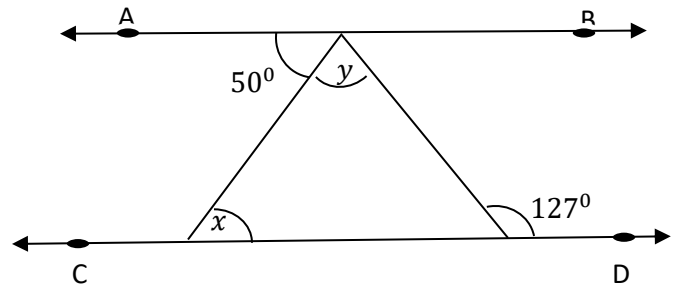
<div align="center"><u>Section-C</u> (2 x 4 = 8)</div>

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

9. If a varies inversely as $b + 2$ and if $a = 8$ when $b = 1.5$, find a when $b = 5$.
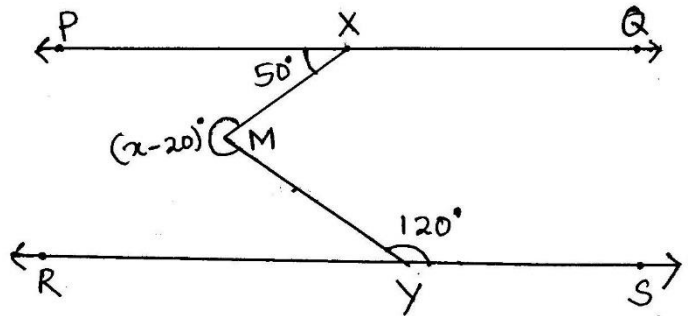
<div align="center">OR</div>

  x and y are in direct variation. If $y = 10$, then $x = 5$, when $x = 10$ then find the value of y.

10. In the figure, if AB ‖ CD, $\angle APQ = 50°$
    and $\angle PRD = 127°$, find x and y.

11. In the figure, PQ ‖ RS and $\angle PXM = 50°$
    and $\angle MYS = 120°$. Find the value of x.

<div align="center"><u>Section-D</u> (3 x 4 = 12)</div>

12. Find the square root of 683.95 correct to 3 decimal places.

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

<div align="center">OR</div>

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

14. 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.

15. Draw a line segment AB of length 6.5 cm and divide it into 5 equal parts.

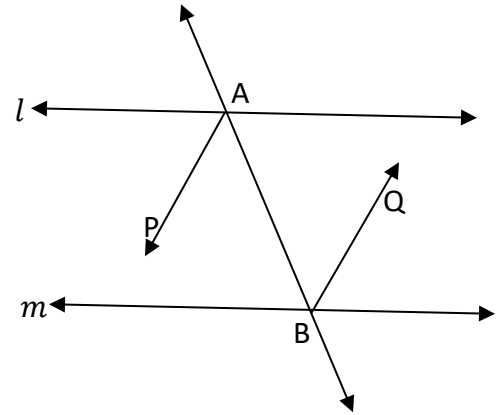<div align="center"><u>Section-E</u> (2 x 5 = 10)</div>

16. 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.

OR

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

17. AP and BQ are bisectors of two alternate interior

angles formed by the intersection of transversal and

with parallel lines l and m in the given figure.

 Show that AP is parallel to BQ.

****END****