DAV PUBLIC SCHOOLS, BHUBANESWAR
PERIODIC ASSESSMENT-I (2022-23)

- Please check that this question paper contains **04** printed pages.
- Check that this question paper contains **17** questions.
- Write down the Serial Number of the question in the left side of the margin before attempting it.
- 15 minutes time has been allotted to read this question paper. The question paper will be distributed 15 minutes prior to the commencement of the examination. The students will read the question paper only and will not write any answer on the answer script during this period.

CLASS – VIII

SUBJECT – MATHEMATICS

Time Allowed:1½ Hours   **Maximum Marks : 40**

General Instructions:
1. This question paper is divided into five sections A, B, C, D and E.
2. Section-A consists of 6 questions of 1 mark each.
3. Section-B consists of 1case-based question of 4 marks which has 5 case-based sub-parts. An examinee is to attempt any 4 out of 5 sub-parts.
4. Section-C consists of 4 questions of 2 marks each.
5. Section-D consists of 4 questions of 3 marks each.
6. Section-E consists of 2 questions of 5 marks each.
7. Internal choice is provided in 1 question of 1 mark, 2 questions of 2 marks, 1 question of 3 marks and 1 question of 5 marks.
8. Read the questions thoroughly and write down the serial number of the question in the left side of the margin before attempting it.

SECTION – A

Q1. If x and y vary directly with each other, then find p and q.

x	5	p	15
y	7	28	q

Q2. 15 men can build a wall in 42 hours, how many workers will be required for the same work in 30 hours?
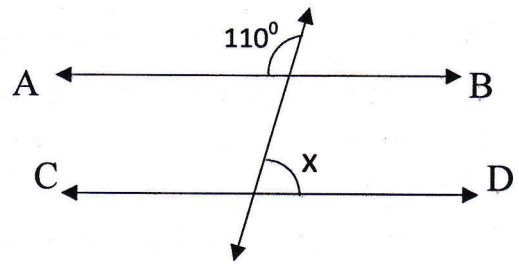
Q3. The area of a square field is 9801m². Find the length of its side.

OR

Simplify: $\sqrt{81} + \sqrt{0.81} + \sqrt{0.0081}$

Q4. Evaluate: $\sqrt{1\frac{56}{169}}$

Q5. In the given figure, AB ‖ CD, then find 'x'

Q6. Three lines perpendicular to the same line are parallel to each other? Is the statement true or false?

SECTION – B

Case Based Questions are compulsory. Attempt any 4 out of 5 sub-parts. Each sub-part carries 1 mark.

Q7. On 25ᵗʰ foundation day, the school decided to award prizes to students for three values-discipline, cleanliness and regularity . The number of students get prizes in the three categories are in the ratio 2:3:4. The product of the ratio is 192.

Using the above information, answer the following questions. **(Do any four)**

a. Find the number of students getting prizes in the category of 'discipline'.
   i. 4   ii. 6   iii. 8   iv. 10
b. Find the number of students getting prizes in the category of 'cleanliness '.
   i. 4   ii. 6   iii. 8   iv. 10
c. Find the number of students getting prizes in the category of 'regularity'.
   i. 4   ii. 6   iii. 8   iv. 10
d. Find the total number of students awarded the prizes.
   i. 12   ii. 14   iii. 16   iv. 18
e. Find the smallest number to be divided by 192 to make it a perfect cube.
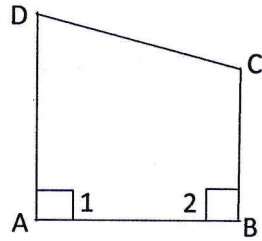   i. 3   ii. 6   iii. 9   iv. 4

SECTION – C

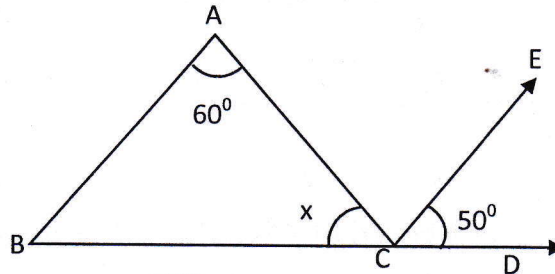**Q8.** Find the value of $\sqrt{176 + \sqrt{2401}}$

OR

If $\sqrt{5625} = 75$, then find $\sqrt{0.5625} + \sqrt{56.25}$

Q9. Evaluate: $\sqrt[3]{\frac{0.027}{0.008}} + \sqrt{\frac{0.09}{0.04}} - 1$

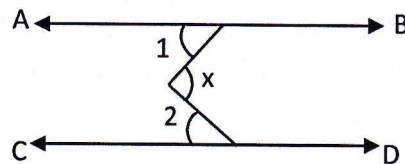**Q10.** In the given figure, $\angle 1 = \angle 2 = 90^0$. Is AD ∥ BC? Justify your answer.

Q11. In the given figure, find 'x' if AB∥ CE and $\angle DCE = 50^0$.

OR

In the given figure, AB ∥ CD. Find 'x' if $\angle 1 = 30^0$ and $\angle 2 = 40^0$.
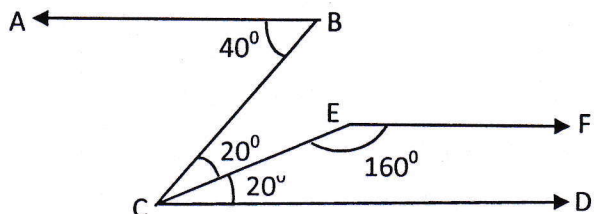

SECTION – D

Q12. Find the least number of six digits which is a perfect square. Also find the square root of that number.

Q13. Find the smallest square number divisible by each one of the numbers 8, 9 and 10.

Q14. Show that in the given figure
   a. AB ∥ CD
   b. CD ∥ EF
   c. AB ∥ EF

Justify your answer in each step.

OR

Draw a line segment of length 10 cm. Using ruler and compass divide this segment in the ratio 3 : 2. Measure the length of these segments.

Q15. A Garrison of 120 men has provision for 30 days. At the end of 5 days, five more men joined them. How many days can they sustain on the remaining provision?

SECTION – E

Q16. In the given figure, $l \parallel m \parallel n$ and $p \parallel q \parallel r$. Find $\angle x$, $\angle y$, $\angle z$, $\angle t$ and $\angle s$ if $\angle 1 = 105^0$.
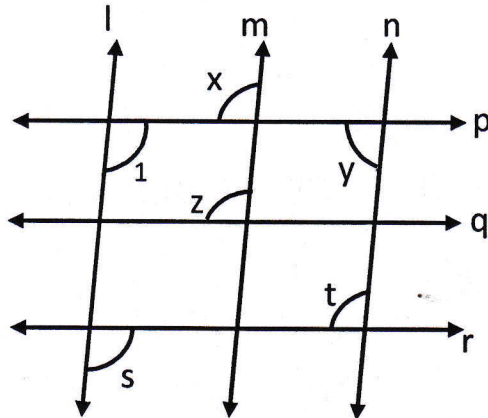
Q17. A train 360m long is running at a speed of 45km/hr. What time will it take to cross a 140m long bridge.

OR

Ravi starts for his school at 8:20 am on his bicycle. If he travels at a speed of 10 km/hr, then he reaches his school late by 8 minutes but on travelling at 16 km/hr, he reaches the school 10 minutes early. At what time does the school start?

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