

Class : 8

Time : $1\frac{1}{2}$ Hours

Score : 40

Instructions

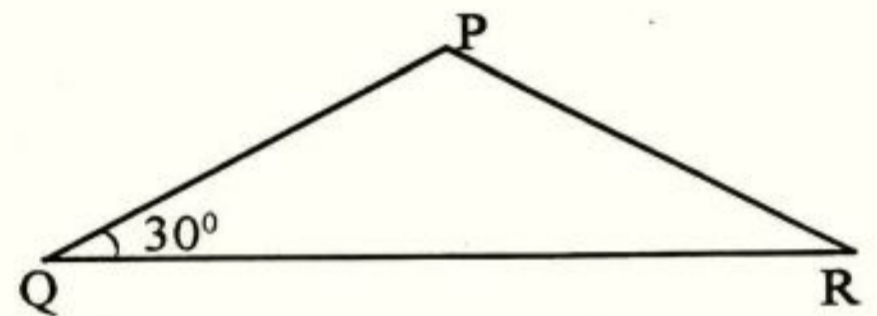
- Read the instructions carefully before answering the questions.
- There is a 'cool off' time of 15 minutes in addition to the writing time. Use this time to get familiar with questions and plan your answers.
- Keep in mind, the score and time while answering the questions. Give explanations wherever necessary.

Answer any 4 Questions from 1 to 5. Each question carries 2 scores. (4 × 2 = 8)

1. In the figure, $PQ = PR$. $\angle Q = 30^\circ$

(a) $\angle R = \dots\dots\dots$

(b) $\angle P = \dots\dots\dots$



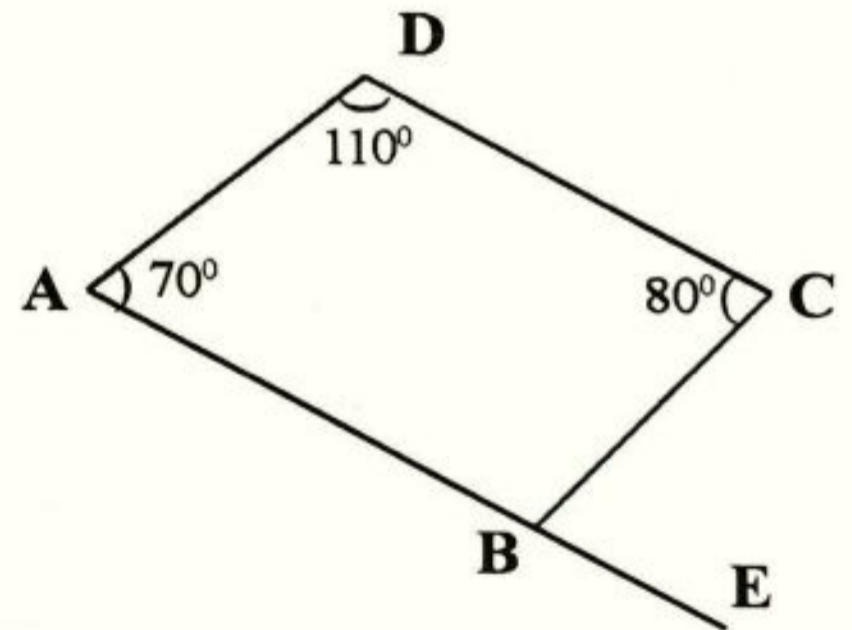
2. 2 is added to 3 times of a number gives 17.

Find the number.

3. In the figure, $\angle A = 70^\circ$, $\angle D = 110^\circ$, $\angle C = 80^\circ$

(a) $\angle ABC = \dots\dots\dots$

(b) $\angle CBE = \dots\dots\dots$



4. The number of girls and boys in a class are in the ratio 2 : 3. Total number of students is 50

(a) What is the number of girls?

(b) What is the number of boys?

5. (a) $-3 \times 4 = \dots\dots\dots$

(b) $5 - (-2) = \dots\dots\dots$

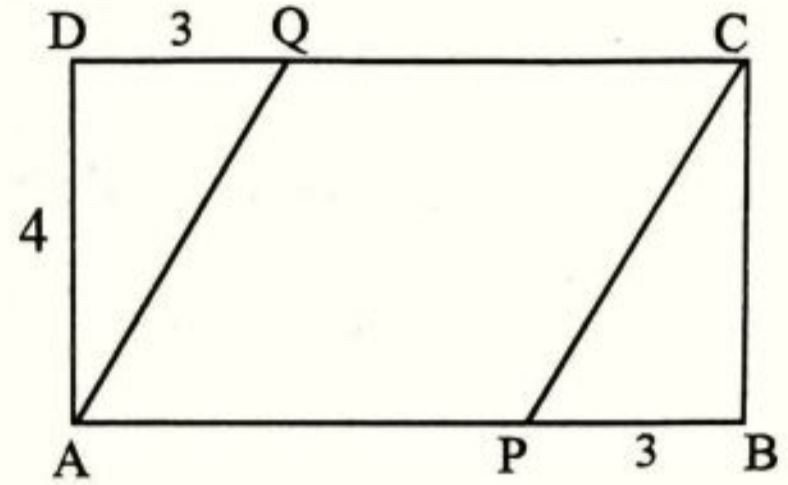
Answer any 4 Questions from 6 to 11. Each question carries 3 scores. ($4 \times 3 = 12$)

6. Fill in the blanks

- (a) $a^2 - b^2 = \dots \times (a - b)$
- (b) $100^2 - 99^2 = \dots \times 1$
- (c) $(a + 1)^2 - 1^2 = (a + 2) \times \dots$

7. The perimeter of a triangle is 36 centimetres and the sides are in the ratio 2 : 3 : 4. Find length of its sides.

8. In the figure, ABCD is a rectangle.
 AB = 8 centimetres, AD = 4 centimetres,
 PB = QD = 3 centimetres



- (a) Find the area of the rectangle ABCD.
- (b) What is the length of AP?
- (c) What is the area of parallelogram APCQ?

9. If $x = 3$, $y = -7$, then find

- (a) $x + y = \dots$
- (b) $x - y = \dots$
- (c) $(x + y)(x - y) = \dots$

10. The scores of 25 students in a mathematics test are given below.

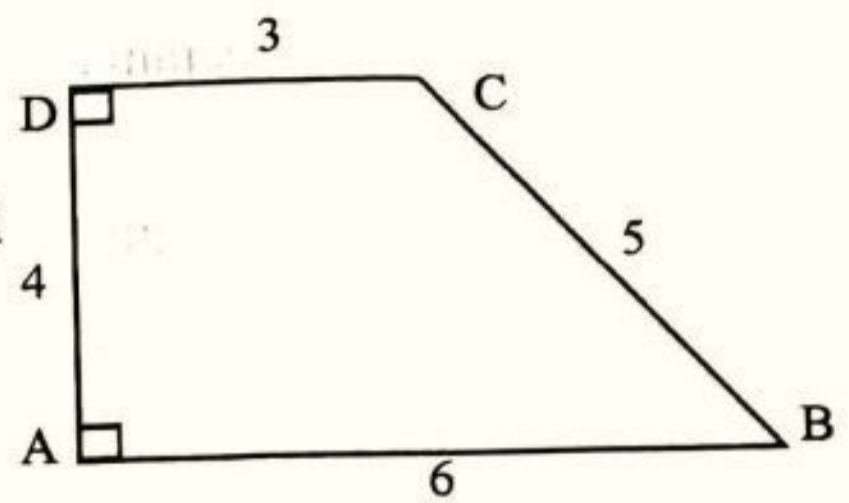
- 20, 12, 15, 35, 26, 32, 28, 24,
 9, 14, 8, 40, 29, 30, 36, 34,
 22, 23, 11, 10, 41, 47, 42, 35, 38

Make a frequency table as given below.

Score	Tally mark	Number of Students
0 - 10		
10 - 20		
.....		
.....		
.....		
Total		

11. In the figure ABCD is a trapezium.

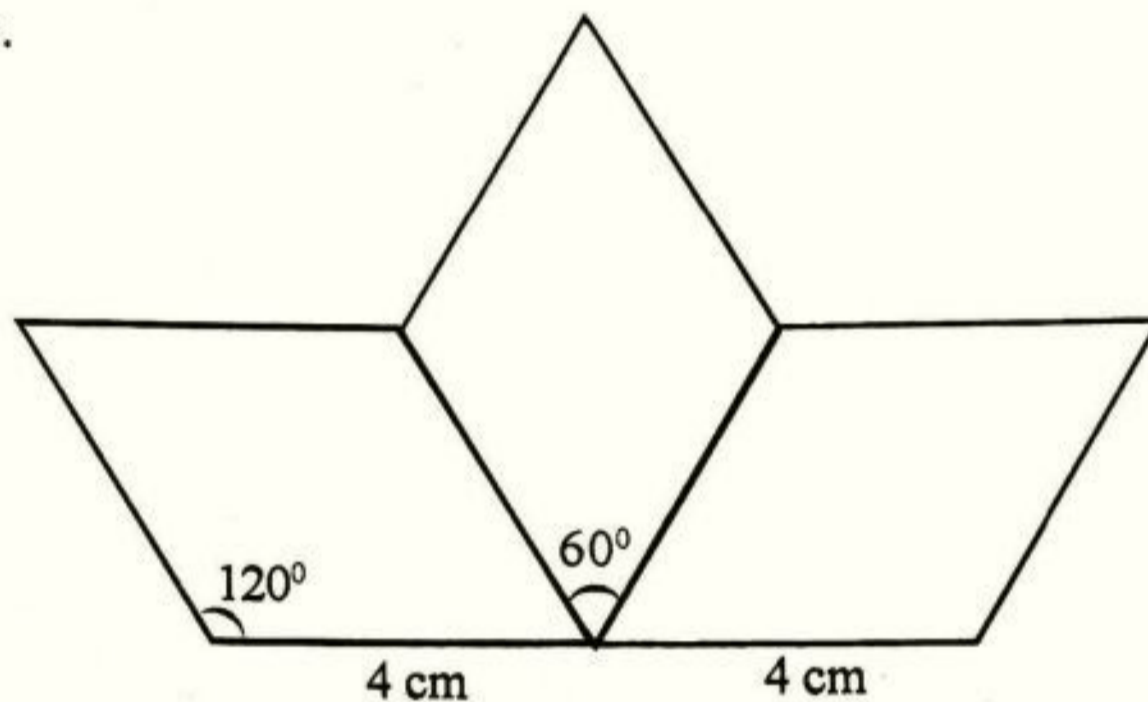
$AB = 6$ centimetres, $BC = 5$ centimetres,
 $CD = 3$ centimetres, $AD = 4$ centimetres and
 $\angle A = \angle D = 90^\circ$



- (a) Find the sum of the parallel sides of the trapezium.
 (b) Find the area of the trapezium.

Answer any 5 Questions from 12 to 18. Each question carries 4 scores. ($5 \times 4 = 20$)

12. Three equal rhombuses are drawn as shown below. Draw the figure with given measurements.



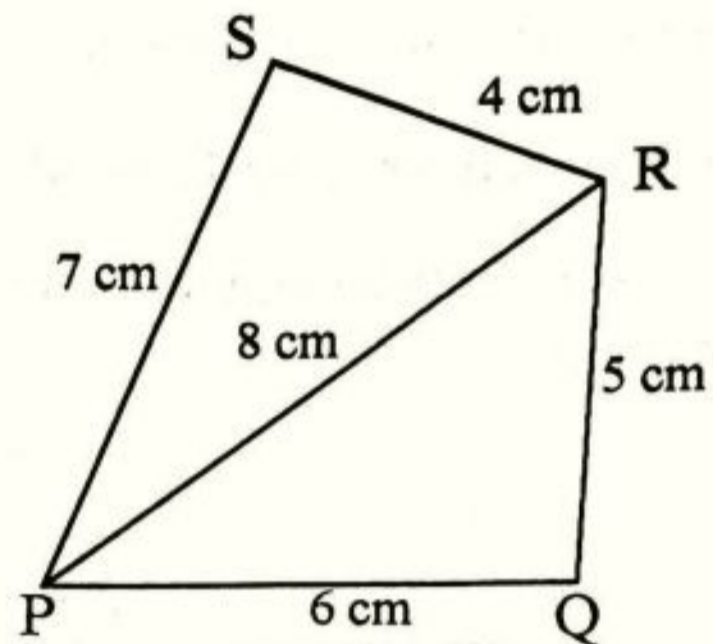
13. Electricity consumption of 30 families in a locality are given in the table below. Draw a histogram.

Electricity Consumption (in Units)	Number of Families
100 - 200	5
200 - 300	7
300 - 400	8
400 - 500	6
500 - 600	4

14. Anu deposited Rs.10000 in a bank compounding interest at 10% per annum. After two years, she deposited another Rs.10000. How much amount will Anu get at the end of third year?

15. The perimeter of a rectangle is 48 centimetres. The ratio between the length and breadth is 5 : 3,
- length + breadth =
 - Calculate the length and breadth.
 - If the breadth is increased by 1 centimetre, then find the ratio between length and breadth

16. Draw a quadrilateral with the measurements shown in the figure.



17. $x = -5$, $y = -6$, $z = 4$

a) $x - y = \dots\dots\dots$

b) $(x - y)z = \dots\dots\dots$

c) Check whether $(x - y)z$ and $xz - yz$ are equal or not.

18. Read and understand the mathematical concept given below and answer the following questions.

$$2^2 + 1^2 = 3^2 - 2 \times (2 \times 1)$$

$$3^2 + 2^2 = 5^2 - 2 \times (3 \times 2)$$

$$4^2 + 3^2 = 7^2 - 2 \times (4 \times 3)$$

.....

Sum of the squares of two numbers is equal to the difference between the square of the sum of the numbers and twice their product.

(a) Write the next line.

(b) $8^2 + 7^2 = 15^2 - 2 \times (\dots\dots\dots)$

(c) $20^2 + 10^2 = \dots\dots\dots - 2 \times (\dots\dots\dots)$

(d) $a^2 + b^2 = \dots\dots\dots$