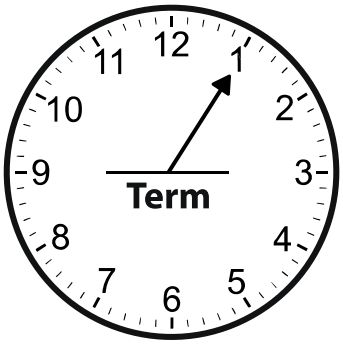
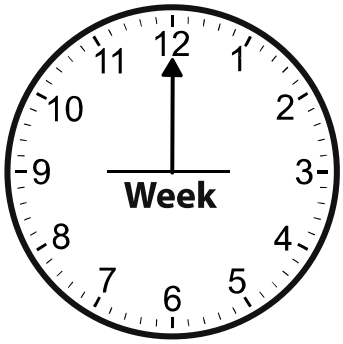
The
SCHOOLING SOCIETY

MATHEMATICS

P 5





Area of Triangles

Overlapping Areas

Note :

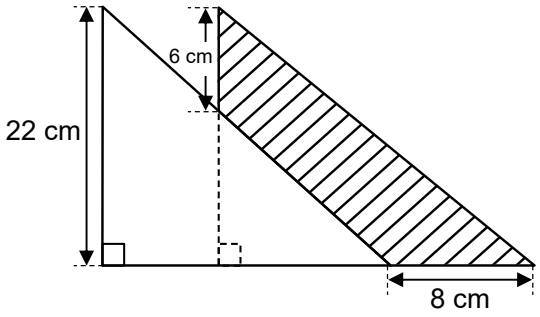
- Identify Base and Height of Triangles
- Base and Height must be perpendicular to each other
- Area of triangle = $\frac{1}{2}$ x base x height

Name: ..... Teacher: ..... Date: .....

Overlapping Areas

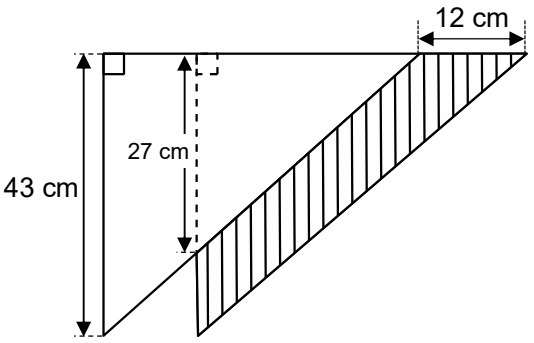
* The figures below are not drawn to scale.

1. The figure below shows two identical right-angled triangles overlapped each other. Find the area of the shaded part of the figure.



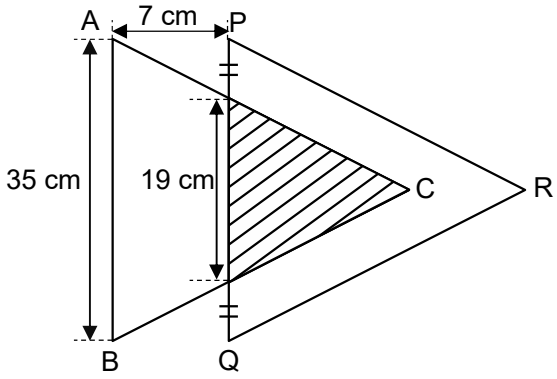
Ans: _____

2. The figure below shows two identical right-angled triangles overlapped each other. Find the shaded area.



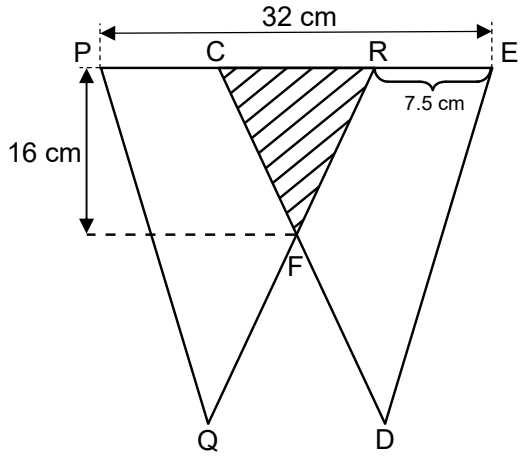
Ans: _____

3. Triangles ABC and PQR are identical and they overlapped each other. Find the total area of the unshaded parts of the figure.



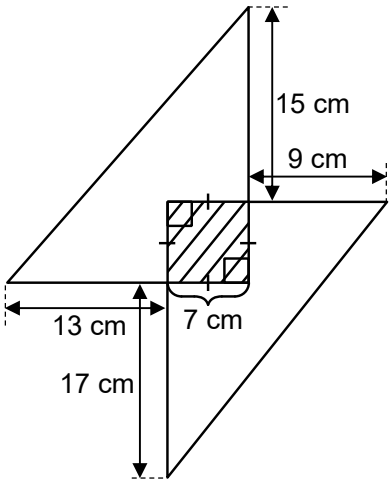
Ans: _____

4. Two identical triangles CDE and PQR overlapped each other. The overlapped area CFR was $\frac{2}{9}$ of the area of triangle PQR. Find the total area of the unshaded parts.



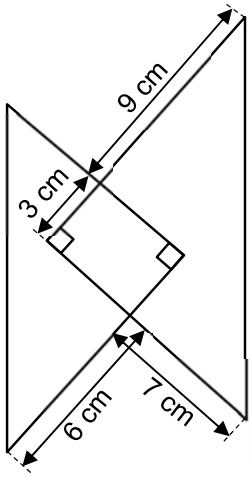
Ans: _____

5. Two right-angled triangles overlapped each other. The overlapped area is a square. Find the area of the whole figure.



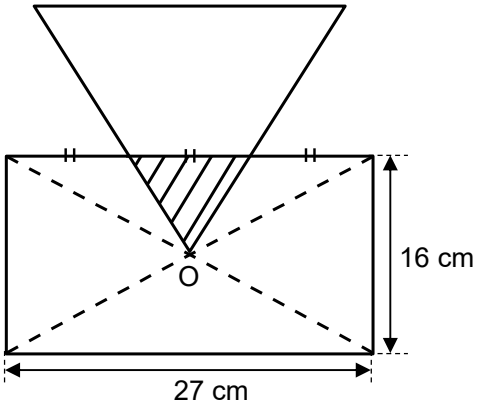
Ans: _____

6. Two isosceles right triangles overlapped each other. Find the area of the whole figure.



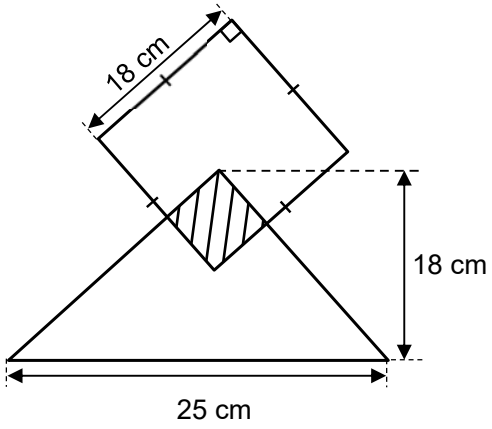
Ans: _____

7. The figure below shows a triangle and a rectangle that overlapped each other. O is the intersection of the diagonals of the rectangle. Given that $\frac{2}{7}$ of the triangle is shaded, find the total area of the unshaded parts.



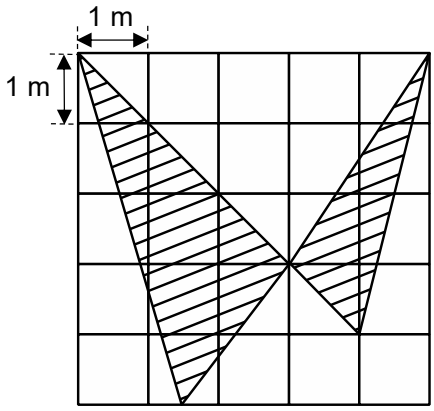
Ans: _____

8. The figure below shows a square and a triangle that overlapped each other. If $\frac{7}{9}$ of the square is unshaded, find the total area of the unshaded parts.



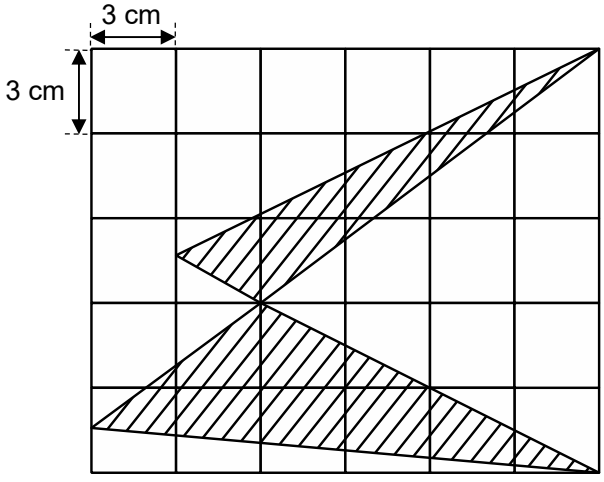
Ans: _____

9. The triangles overlapped each other. Find the total shaded area of the figure.



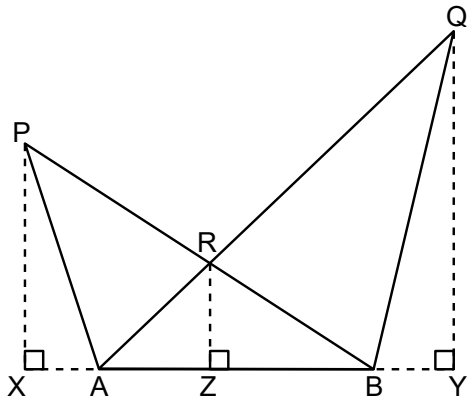
Ans: _____

10. The triangles overlapped each other. Find the total shaded area of the figure.



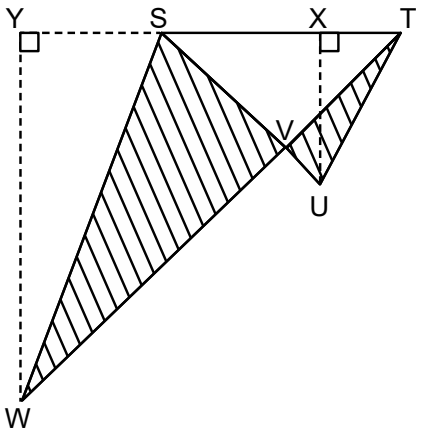
Ans: _____

11. Two triangles ABP and ABQ overlapped each other. The length of PX is twice the length of RZ. The length of QY is thrice the length of RZ. Given that the area of triangle ABR is 34 cm^2, find the area of the whole figure.



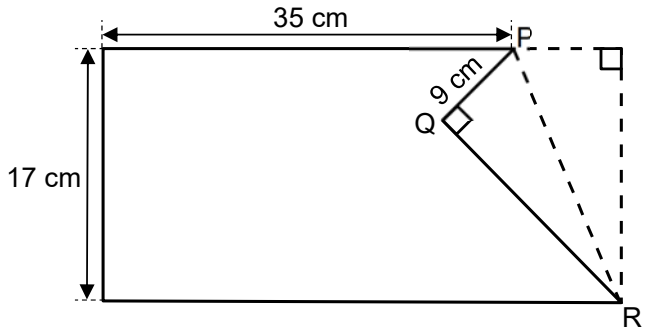
Ans: _____

12. Triangles SUT and SWT overlapped each other. The length of XU is $\frac{2}{5}$ the length of YW. Given that the area of triangle SUT is 142cm^2 and the area of triangle SVT is 124cm^2, find the total shaded area of the figure.



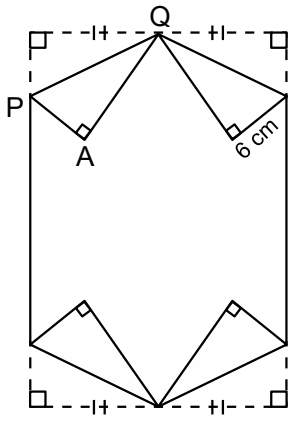
Ans: _____

13. A rectangular piece of paper is folded along the dotted line PR. The folded corner is then cut along the lines PQ and QR. Find the area of the remaining piece of paper.



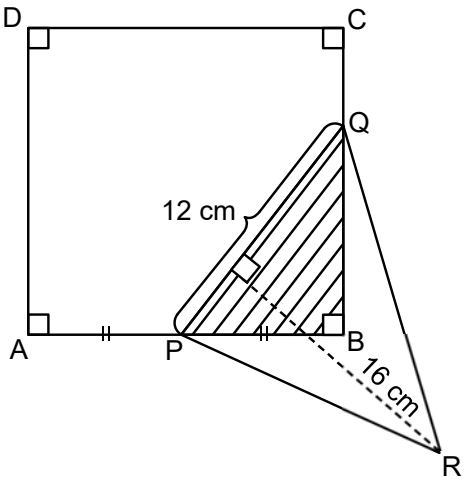
Ans: _____

14. The corner of a rectangular piece of paper was folded along the line PQ as shown below. The folded corner was then cut along the lines AP and AQ. The other 3 corners were also folded and cut in the same way. Given that the breadth of the rectangle is $\frac{2}{3}$ of its length and the perimeter of the rectangular piece of paper was 120cm, find the area of the remaining piece of paper.



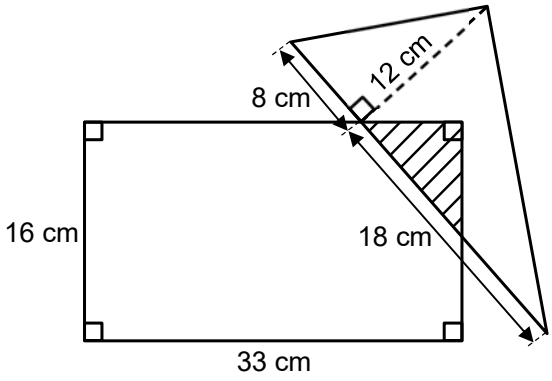
Ans: _____

15. The figure below shows a square ABCD and a triangle PQR that overlapped each other. Given that AP=PB, BQ=2QC and $\frac{5}{8}$ of the triangle is shaded, find the area of the square.



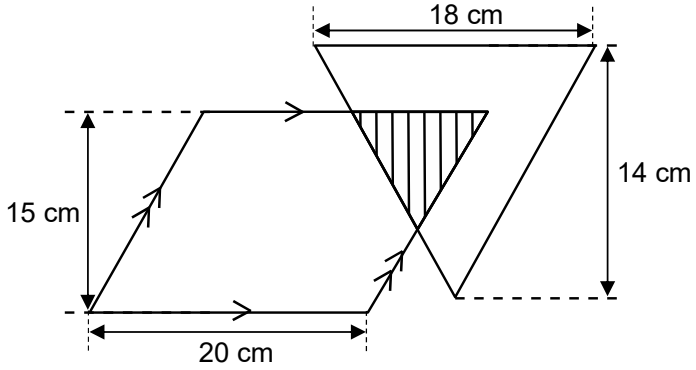
Ans: _____

16. The figure below shows a triangle and a rectangle that overlapped each other. If $\frac{3}{22}$ of the rectangle is shaded, what fraction of the figure is shaded? Express your answer in the simplest form.



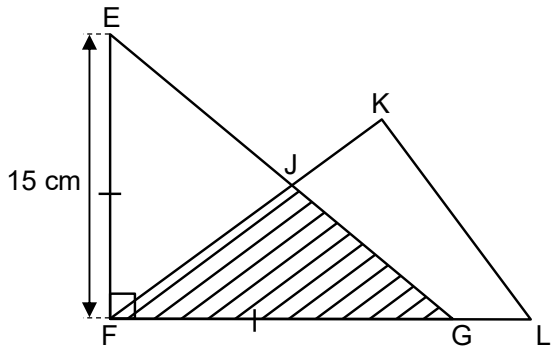
Ans: _____

17. The figure below shows a triangle and a parallelogram that overlapped. If $\frac{3}{10}$ of the parallelogram is shaded, what fraction of the figure is shaded? Express your answer in the simplest form.



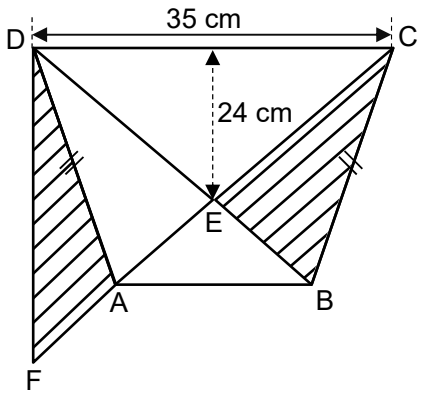
Ans: _____

18. Triangles EFG and FKL overlapped each other. The difference between the area of FEJ and the area of GJKL is 46cm^2. Given that EF=FG, find the area of triangle FKL.



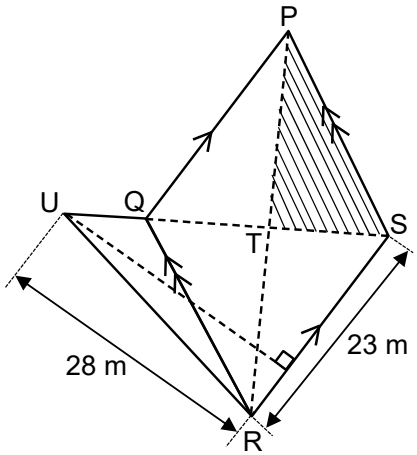
Ans: _____

19. ABCD is an isosceles trapezium. Triangle CDF overlapped trapezium ABCD. The area of the triangle CDE is $\frac{5}{9}$ of the area of triangle CDF. Find the total area of the shaded parts.



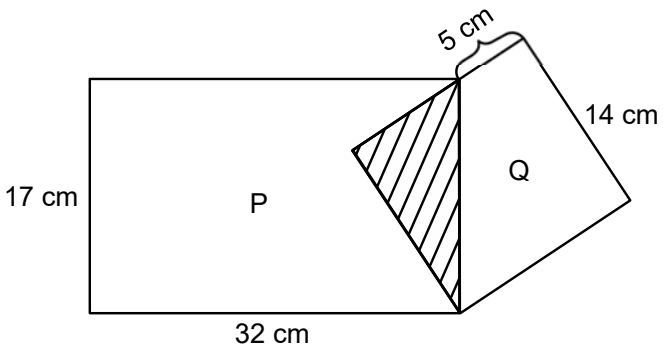
Ans: _____

20. Triangle SUR overlapped parallelogram PQRS. The total area of triangle QUR is 45.5m^2. Given that the area of triangle SUR is $3\frac{1}{2}$ of the area of triangle RST, find the shaded area.



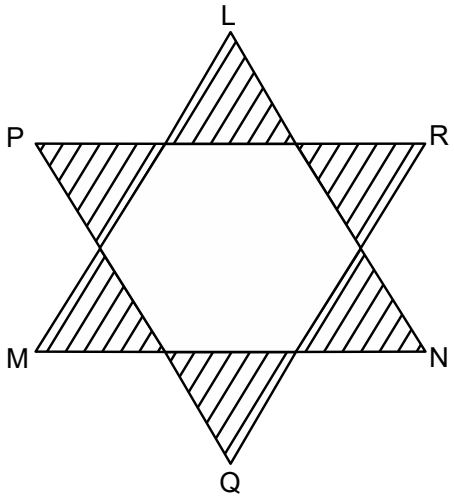
Ans: _____

21. The figure below is formed by Rectangle P overlapped Square Q. The overlapping part is shaded. Find the total area of the unshaded parts.



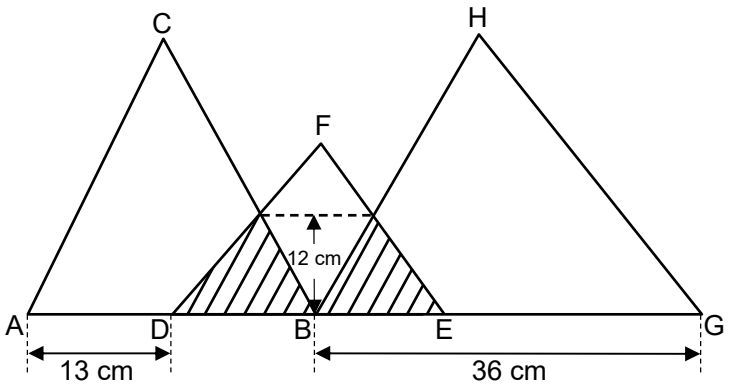
Ans: _____

22. Triangle LMN overlapped triangle PQR to form 6 identical triangles. The area of triangle PQR is 153cm^2 and the area of each shaded triangle is $\frac{1}{9}$ of the area of triangle PQR. Find the overlapped area.



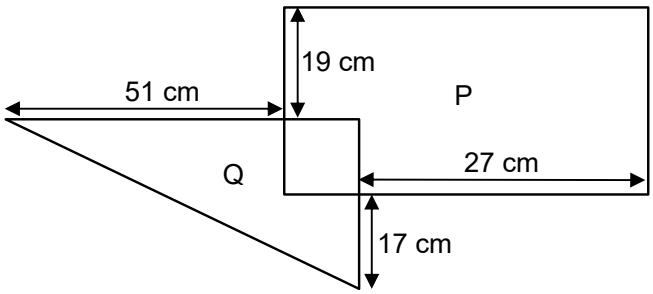
Ans: _____

23. In the figure below, triangles ABC and BGH overlapped triangle FDE. AD = BD and BG = 3BE. Find the total area of the overlapped parts.



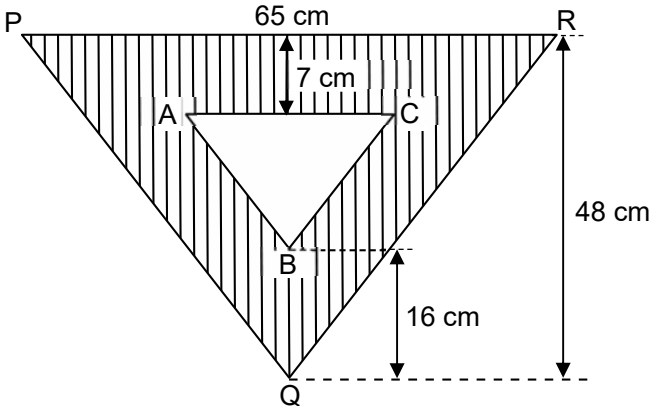
Ans: _____

24. The figure is formed by a rectangle P overlapping a triangle Q. The overlapped part is a square of area 225cm^2. Find the area of triangle Q.



Ans: _____

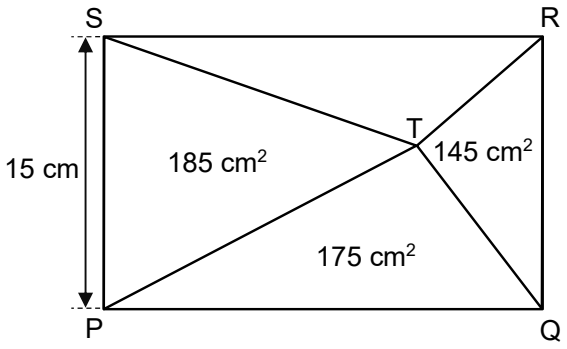
25. In the figure below, triangle ABC overlapped triangle PQR. The length of AC is $\frac{3}{5}$ that of PR. Find the shaded area.



Ans: _____

THINK!

1. Find the area of triangle STR.



2. WXYZ is square which is made up of 4 identical triangles and a small square. Each triangle has a base of 5cm and a height of 12cm. Find the length of WX.