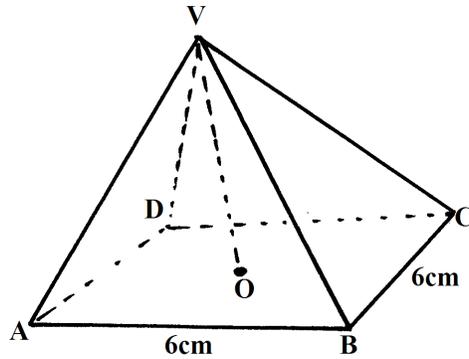
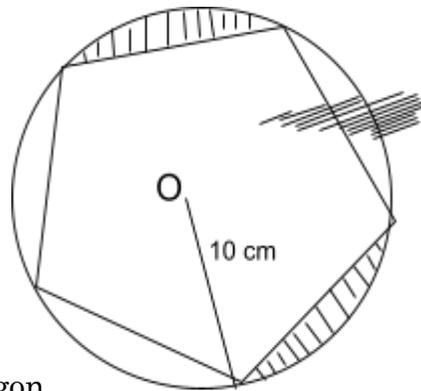


1. Area of polygons

1. The figure below is a square based pyramid ABCD with $AB = BC = 6\text{cm}$ and height $VO = 10\text{cm}$.

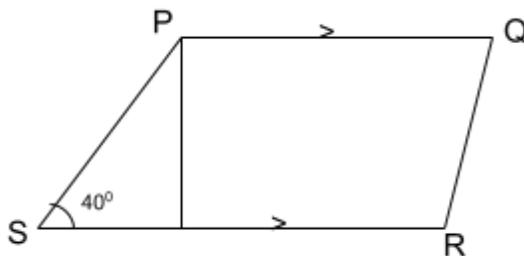


- (a) State the projection of VA on the base ABCD. (1mk)
 - (b) Find the length VA. (3mks)
 - (c) Calculate angle between VA and plane ABCD. (2mks)
 - (d) Find angle between VCD and ABCD. (2mks)
 - (e) Calculate the volume of the solid (2mks)
2. The diagram below, not drawn to scale, is a regular pentagon circumscribed in a circle of radius 10 cm at centre O



Find

- (a) The side of the pentagon (2 mks)
 - (b) The area of the shaded region (3 mks)
3. PQRS is a trapezium in which PQ is parallel to SR, $PQ = 6\text{cm}$, $SR = 12\text{cm}$, $\angle PSR = 40^\circ$ and $PS = 10\text{cm}$. Calculate the area of the trapezium. (4mks)



4. A regular octagon has an area of 101.8 cm^2 . calculate the length of one side of the octagon (4marks)
5. Find the area of a regular polygon of length 10 cm and side n , given that the sum of interior angles of $n : n - 1$ is in the ratio 4 : 3.
6. Calculate the area of the quadrilateral ABCD shown:-

