



Name: _____

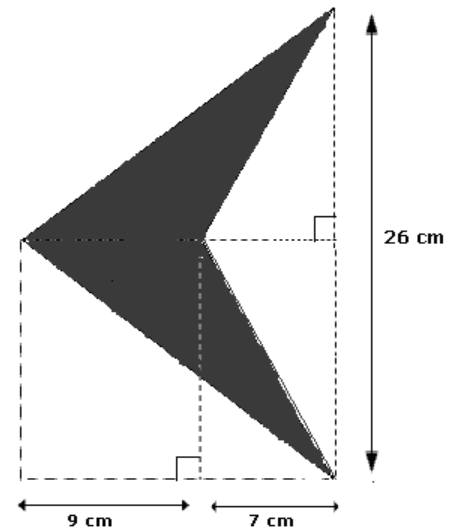
Date: _____

Score: $\frac{\quad}{25}$

Area of Triangles and Parallelograms

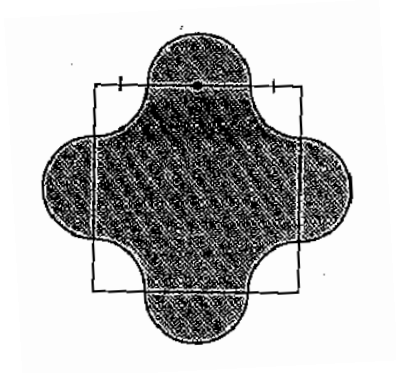
1). A rectangle has length $4x$ and width $2x$. If its area is 32 cm^2 , what are the rectangle's dimensions and what is its perimeter? (2pts)

2) Find the area of the black figure (3pts)

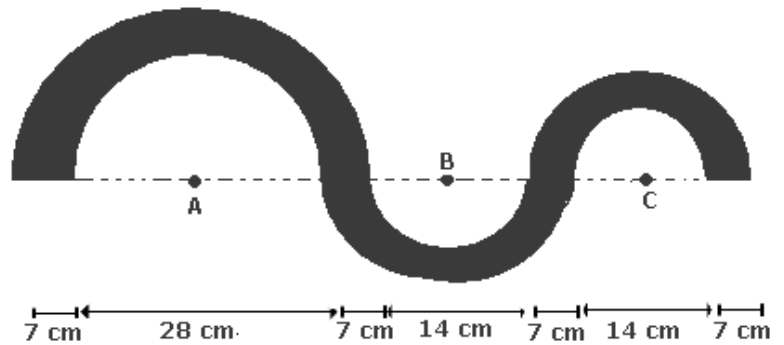


Circumference and Area of Circles

3) In a figure shown, the square has a length of 10 cm and each semi circle has a diameter of 5 cm. Find the area of the shaded figure. Use 3.14 for π (3pts)

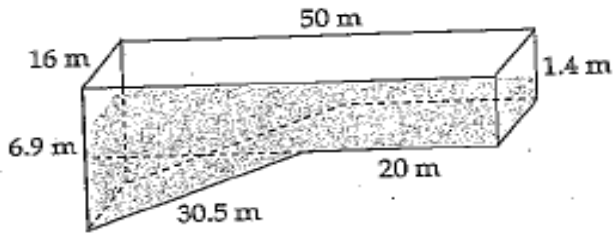


4) In the figure shown, A, B, and C are the centers of the respective semicircles. Find the total of circumferences of the inner and outer semi-circles. Use $\pi = \frac{22}{7}$. (3pts)



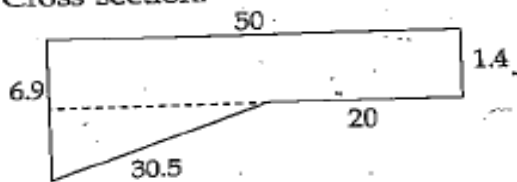
Volume and Surface Area of Prisms

5) A rectangular swimming pool measures 50 meters by 16 meters. It is 1.4 meters deep at the shallow end. 20 meters away from the shallow end the bottom drops down steadily until it is 6.9 meters deep at the far end.



a. Calculate the area of the cross section. (2pts)

Cross-section:



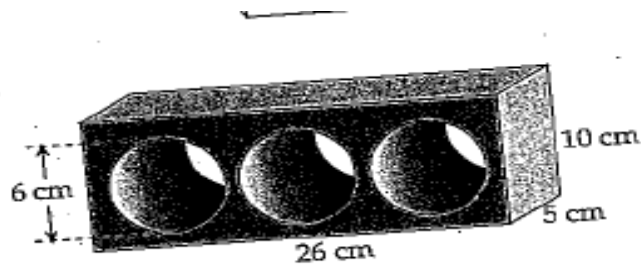
b. The inside walls and bottom of the pool are to be painted with a special sealant which costs $\$23/\text{m}^2$

Calculate the cost of painting the pool. (3pts)

6) Jack placed a rectangular box into a rectangular container; the rectangular box is 15 cm long, 10 cm wide and 10 cm high. The rectangular container is 30 cm long, 20 cm wide and 15 cm high. Jack filled the box with sand to a depth of 7 cm and filled the container with sand to a depth of 10 cm. how much sand did he use in all? (2pts)

Volume and Surface Area of Cylinders and Cones

7) The diagram below shows a special design of a concrete construction block. Cylindrical shaped holes are cut from the centre to make more surface area and therefore a stronger building block.



Calculate:

- a.** The volume of one cylinder cut from the block of concrete. (2pts)



- b.** The interior surface area of one cylindrical hole. (2pts)

8) Last weekend Brian needed to buy some compost for his vegetable garden, so he ordered 5 cubic meters (5m^3) from the garden centre. When the load of compost was delivered it formed a pile in the shape of a cone. To check the volume of his order he measured the circumference and height of the pile. The circumference measured about 12 meters and the height was about 1.5 meters.

Did Brian get the amount of compost he ordered? Support your answer with working. (3pts)