AREA

Identify and Calculate the Area   for each Quadrilateral.

1)
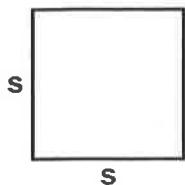
s = 59 cm

Area: _____

2)
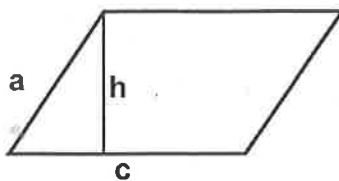
a = 60.45 mm
c = 94 mm   h = 56 mm

Area: _____

3)
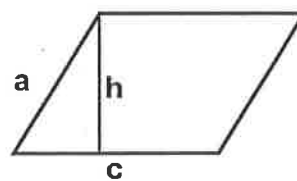
a = 59.71 cm
c = 81 cm   h = 55 cm

Area: _____

4)
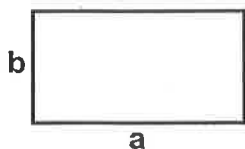
a = 83 cm   b = 44 cm

Area: _____

5)
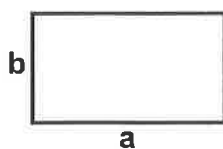
a = 76 mm   b = 43 mm

Area: _____

6)
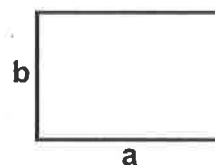
a = 73 mm   b = 50 mm

Area: _____

7)
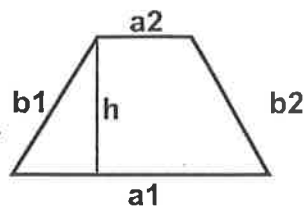
a1 = 100 cm   a2 = 37 cm
b1 = 63.06 cm   b2 = 61.99 cm
h = 54 cm

Area: _____

8)
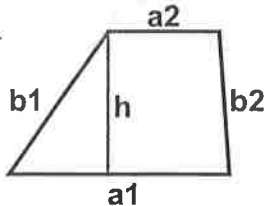
a1 = 88 mm   a2 = 44 mm
b1 = 68.79 mm   b2 = 56.15 mm
h = 56 mm

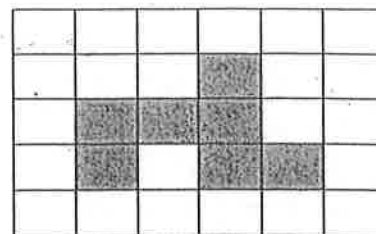Area: _____

9)
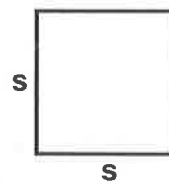
s = 56 mm

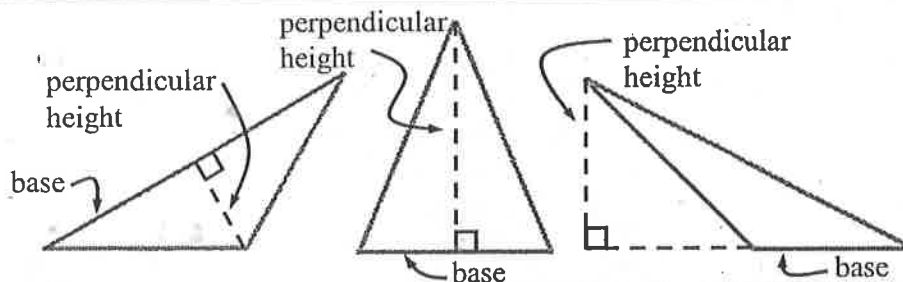Area: _____

Name: _____   DATE: _____
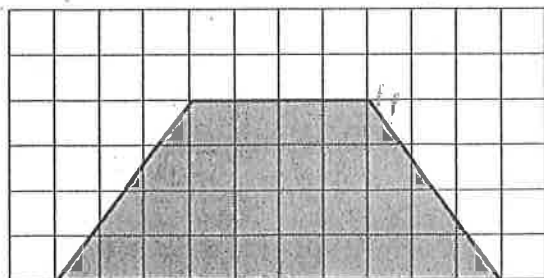
1.   a.   Determine the area of the shaded region.

The area of a triangle is $A = \dfrac{bh}{2}$, where b is the length of the base and h is the perpendicular height.

perpendicular height

perpendicular height

perpendicular height

perpendicular height

base

base

base

---

2.   Complete the table.

Area of Triangles		
Base	**Height**	**Area**
3 cm	2 cm	
4.5 m		9 m^2
5 cm		7 cm^2
	1 km	1 km^2
7 mm	2.6 mm	

3.   a. Estimate the area of the trapezoid.

b. Calculate the exact area of the trapezoid by using the formula $A = \dfrac{(a+b)h}{2}$.

$\updownarrow$ 1 cm

4.   The area of each square of the grid is 1 cm^2. Estimate the area of each shape.

a.

b.

c.
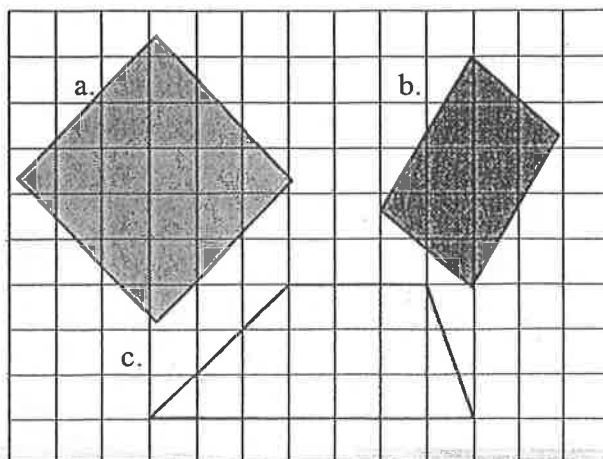
5.   The area of each square of the grid is 1 cm^2. Calculate the area of each shape.

a.

b.

c.

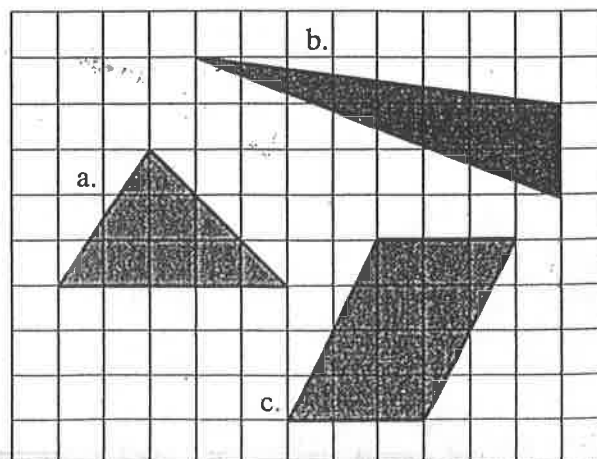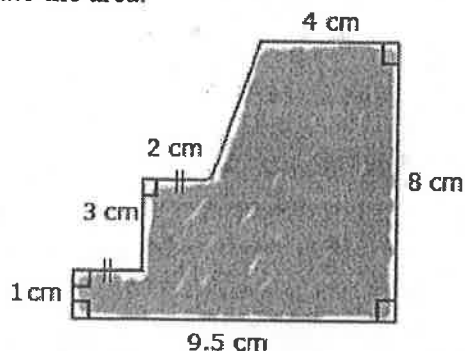6. a. *Find the* area of a trapezoid with the given measurements, where the first two are the parallel sides and the third is its height.

      i. 12 cm, 6 cm, 5 cm   ii. 10 cm, 4 cm, 6 cm   iii. 5 cm, 2 cm, 3 cm

7. Calculate the area.

4 cm

2 cm

8 cm

3 cm

1 cm

9.5 cm

8. Matt is constructing a rectangular backyard. He wants to cover the backyard with grass and put a fence around all four sides.

    a. The sod will cost $ 2.45 per square metre. Matt's budget for sod is $110.25. What is the area of the lawn?

9. The Bermuda Triangle is a region in the Atlantic Ocean famous for many mysterious tragedies. The base of the triangle - the distance between Bermuda and Miami - is approximately 2130 km. The height of the triangle, stretching between Puerto Rico and the midpoint of the base, is approximately 1400 km. What is the area of the Bermuda Triangle?

Bermuda

2130 Km

Miami

1400 km

San Juan
Puerto Rico

Bermuda
Triangle

Caribbean Sea
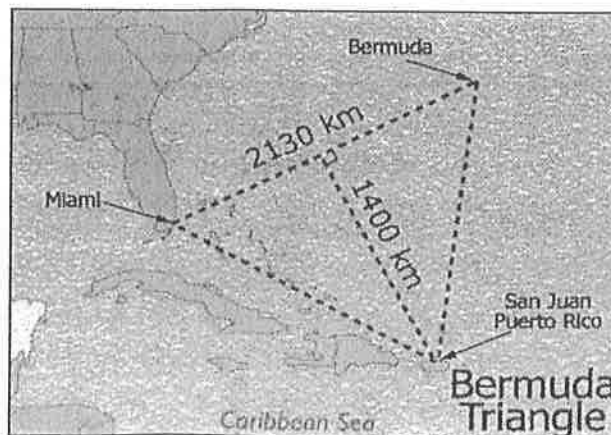
Area of a Circle
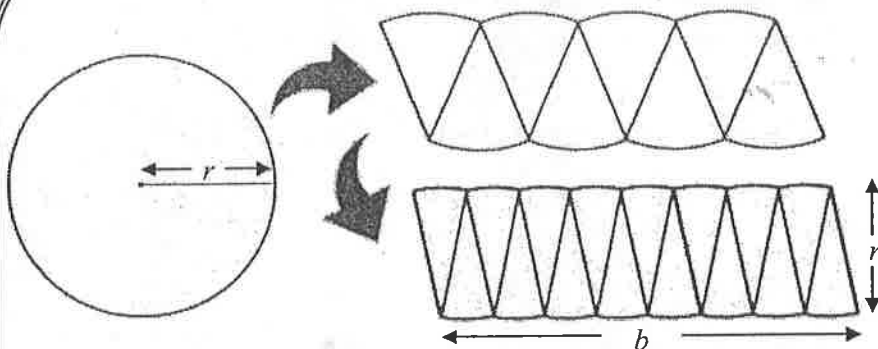
The circle is cut in half, and each half is divided into four equal segments.

As such division gets finer and finer, the segments fit together to form a figure that is roughly a parallelogram.

The base of the parallelogram is formed by half the circumference of the circle.
The area of circle is $A = b \times r$

$$= \frac{1}{2} \times C \times r$$

$$= \frac{1}{2} \times 2 \times \pi \times r \times r \quad \text{(since } C \pi r 2 \text{)}$$
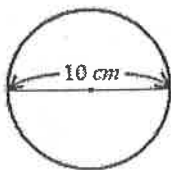
$$= \pi \times r^2$$

The formula for the area of a circle is $A = \pi r^2$.

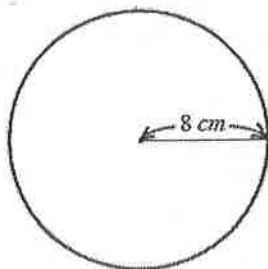1. Calculate the area of each circle that has:

   a. radius of 5 cm.   b. radius of 4.7 m.   c. diameter of 8 cm.   d. diameter of 3.2 cm.

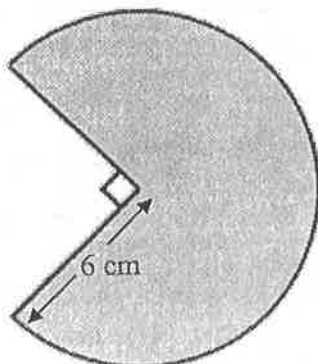2. Calculate the area of each circle, correct to two decimal places.
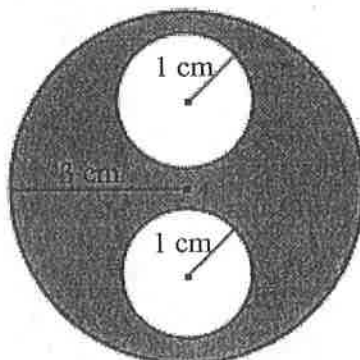
   a.
   10 cm

   b.
   8 cm

3. The hoot of a lost African wild dog can be heard by people from as far away as 4 kilometres. What is the area in which people can hear a hoot?

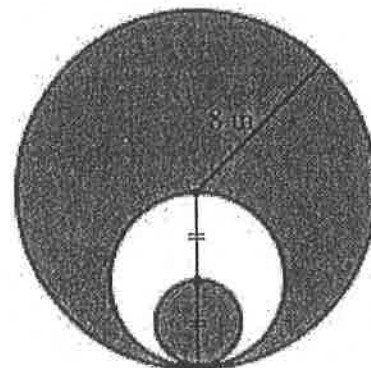4. Calculate the area of the shaded region.

   a.
   6 cm

   b.
   1 cm
   8 cm
   1 cm

   c.
   8 in

5. Typhoons are classified by their size and strength. The minimum radius of a "very large" typhoon is 800 km. What is the smallest possible area covered by a very large typhoon?