SCORE

Geometry
with Classified
answer book

8

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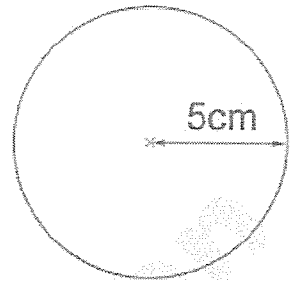
5- Area of a circle

1. Shown is a circle with radius 5cm.

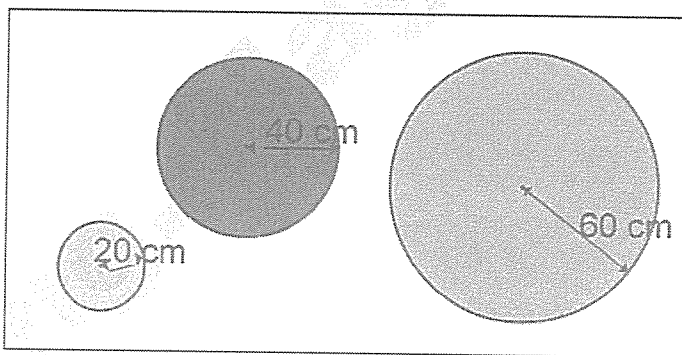   Work out the area of the circle. State the units for your answer. Give your answer to 2 decimal place.

   ....

2. A circle has radius 3cm.

   Work out the area of the circle.
   Give your answer in terms of π

   ....cm²

3. Some spots are painted on a wall.
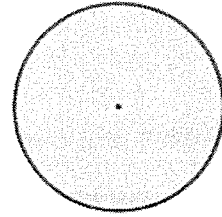

   What is the total area of the wall that is covered by paint?

   Give your answer in terms of π.
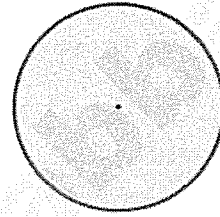
   area = _____

4. a) Filip finds the area of the circle.

His answer is 64π cm2

What is the radius of the circle?

radius = ☐ cm

b) The area of this circle is 144π m^2
What is the diameter of the circle?

diameter = ☐ m

5. The area of a circle is 120 cm^2
   a) Find the radius of the circle.

   Give your answer to 1 decimal place.
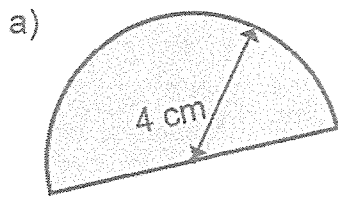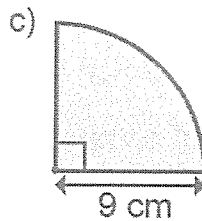
radius = ☐

   b) What is the diameter of the circle?

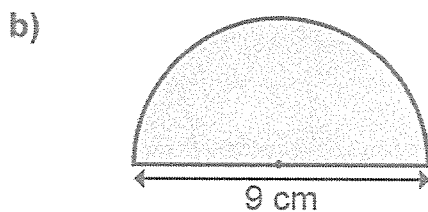diameter = ☐

6. Work out the area of the parts of circles.

Give your answers in terms of π.
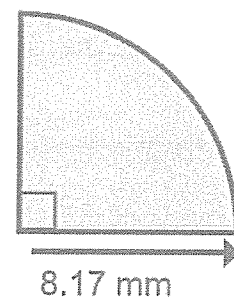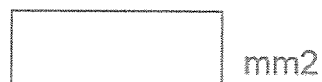
a)

area = _____ cm^2

c)

9 cm

area = _____ cm^2

b)

9 cm

area = _____ cm^2

7. The area of a semicircle is 50π cm^2

What is the radius of the semicircle?

radius = [ ] cm

8. Find the area of the shape.

[ ] mm2

8.17 mm
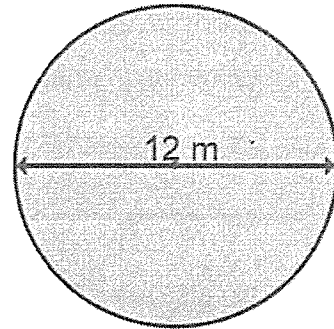
9. Ms Potter is covering a flower bed in compost.

   The flower bed has a diameter of 12 m.

   A bag of compost can cover 15 m² of garden.

   How many bags of compost will Ms Potter need?
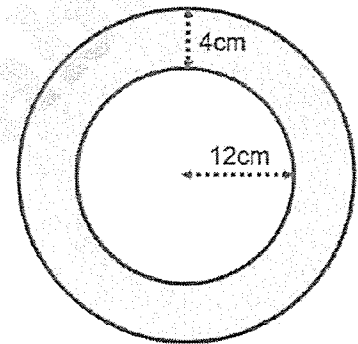
10. Shown below is a circular photo surrounded by a frame.

    The photo has radius 12cm.
    The frame has width 4cm.

    Workout area of the frame.
    This area is shaded in the diagram.

    ....cm²

11. A circle has an area of 200cm²
    Workout the radius of the circle.

    ....cm

12. A circle has a circumference of 40cm.

    Workout the area of the circle.

    ....cm²

13. Kevin is working out the **area** of a circle with **radius**
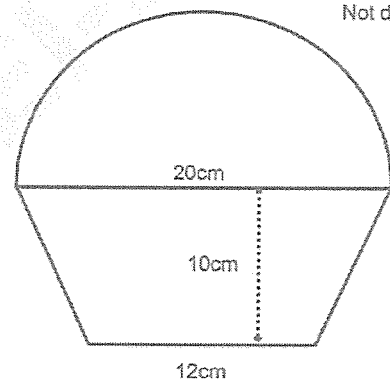
    4cm He writes:

    > Area = π× 8
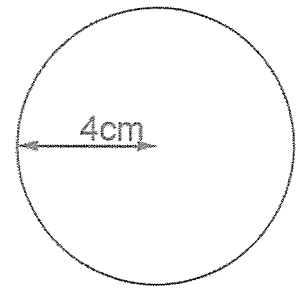
    Explain why Kevin's working is **wrong**.

    4cm

14. A design is shown below.

    Find the area of the design.

    Not drawn accurately

    20cm
    10cm
    12cm

    ....cm²

15. (a) The wheel of a bicycle has a diameter of 62cm

The wheel makes 100 complete rotations.
How far has the bicycle travelled?
Give your answer in metres.

(b) A wheel travels 50m.

The radius of the wheel is 7. 5cm.

How many complete revolutions has the wheel made?

16. James wants to paint a wall. He buys some paint. Each tin of paint costs £1. 99 and covers 5m².

The wall is rectangular but has a semi circle window.
How much will the wall cost to paint?

5m

5m

12m