Maths Task Circles 6-5-20

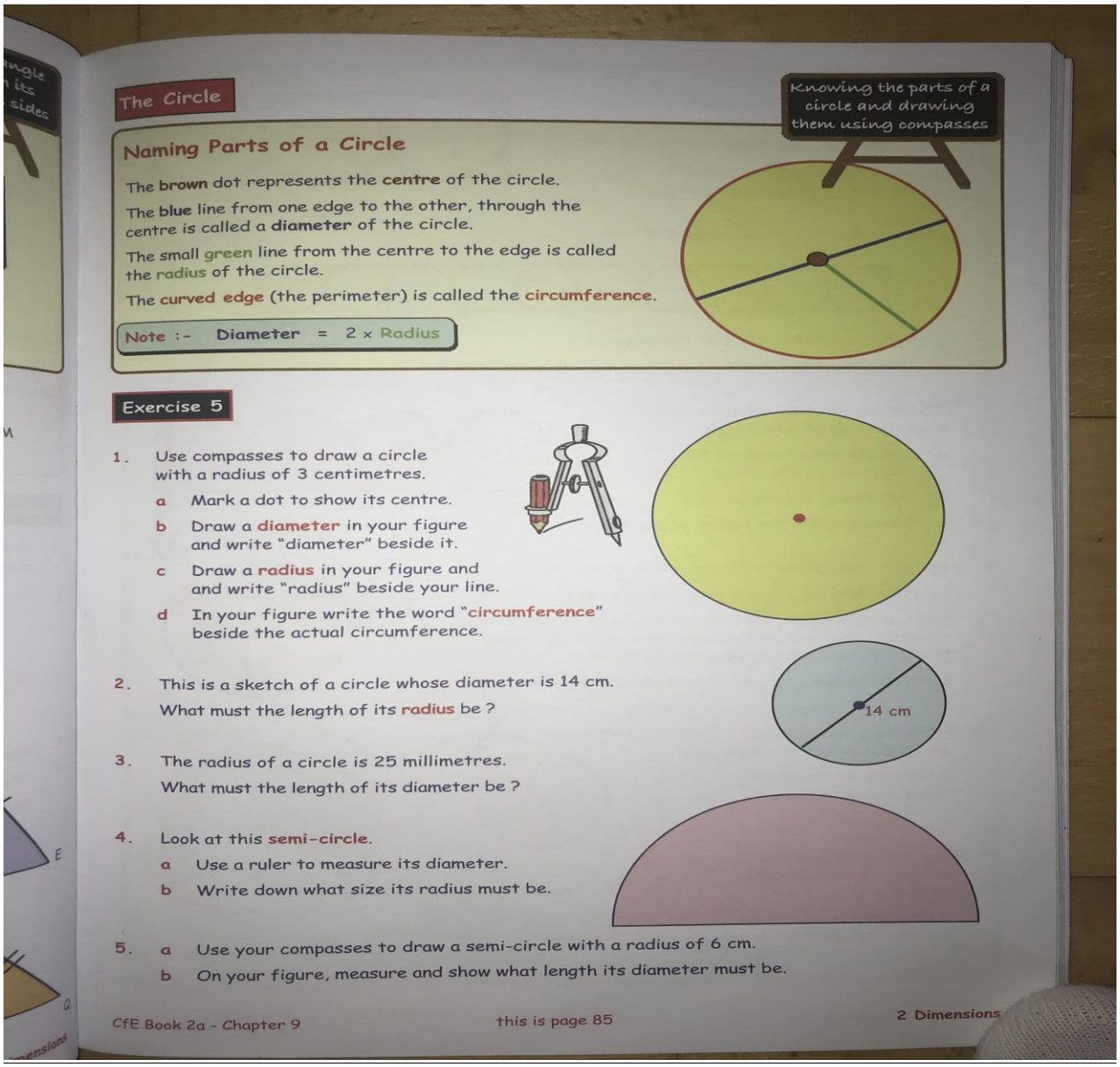
You must watch the video [up to 3mins 12secs] before answering the questions.

https://www.youtube.com/watch?v=cC0fZ_lkFpQ

Circles:- Question 2, 3, 4 [If you have compasses please try question 5]

Squares:- Question 2, 3, 4, 5, 6

Triangles:- Question 2, 3, 4, 5, 6, 7



The Circle

Knowing the parts of a circle and drawing them using compasses

Naming Parts of a Circle

The **brown** dot represents the **centre** of the circle.

The **blue** line from one edge to the other, through the centre is called a **diameter** of the circle.

The small **green** line from the centre to the edge is called the **radius** of the circle.

The **curved edge** (the perimeter) is called the **circumference**.

Note :- Diameter = 2 x Radius

Exercise 5

1. Use compasses to draw a circle with a radius of 3 centimetres.
   - a Mark a dot to show its centre.
   - b Draw a **diameter** in your figure and write "diameter" beside it.
   - c Draw a **radius** in your figure and and write "radius" beside your line.
   - d In your figure write the word "**circumference**" beside the actual circumference.

2. This is a sketch of a circle whose diameter is 14 cm.
   What must the length of its **radius** be ?

   14 cm

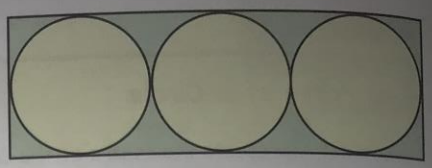
3. The radius of a circle is 25 millimetres.
   What must the length of its diameter be ?

4. Look at this **semi-circle**.
   - a Use a ruler to measure its diameter.
   - b Write down what size its radius must be.

5. a Use your compasses to draw a semi-circle with a radius of 6 cm.
   b On your figure, measure and show what length its diameter must be.

CfE Book 2a - Chapter 9 this is page 85 2 Dimensions

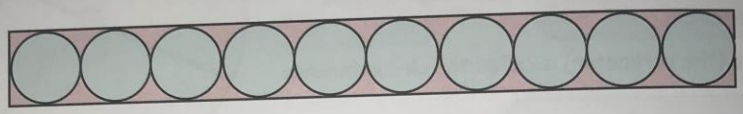
6. Shown is a sketch of 3 touching circles surrounded by a rectangular box.



The **radius** of each circle is 8 cm.

Calculate the length and breadth of the box. (*Do **not** use a ruler*).

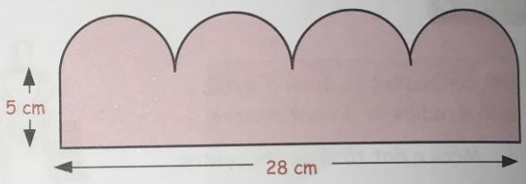
7. The length of the shape below is 40 cm.



a What must the height of the shape be ?

b What must the length of the **radius** of each circle be ?

8. This shape has four identical semi-circles on top of a rectangle.

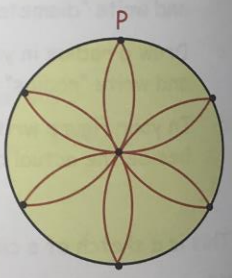


a Calculate the length of the diameter of **one** circle.

b What must the **radius** be ?

c Now calculate the **height** of the shape.

9. Use your compasses to create this flower pattern :-

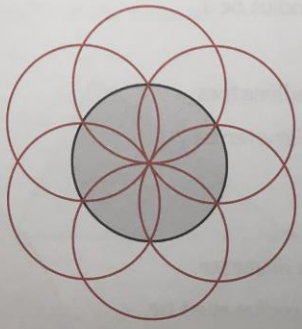


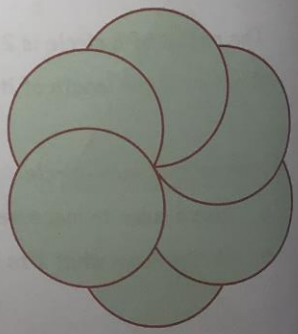
Start by drawing a circle with radius 4 cm.

Next, put your compass point on any point (P) on the circumference and with radius still 4 cm, "step" round the circle moving from one point to the next.

Carefully colour your design and make a class display.

10. Here are 2 more designs created in almost the same way.





Draw each of them using a fixed radius of 5 cm.

11. Try to create your own circular or semi-circular designs.

Make a display of the most imaginative and well drawn designs.