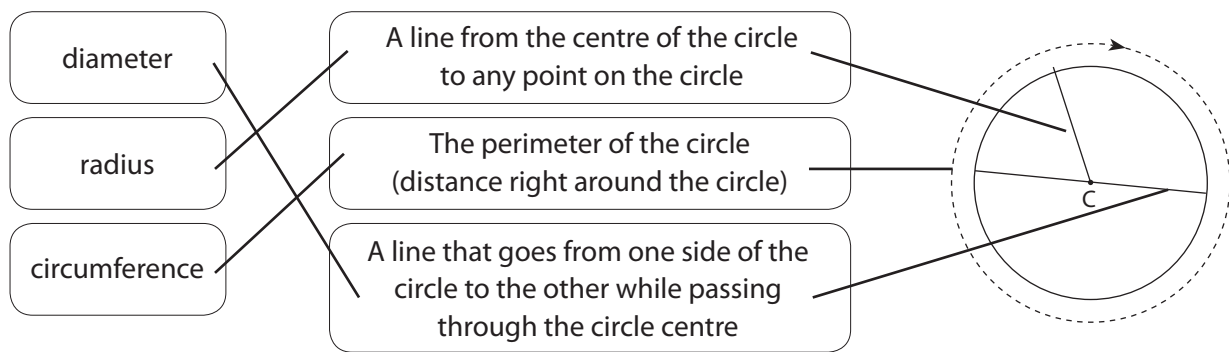**1. Look around your classroom and list 3 examples you can see of a circle:**

i) *The face of the clock*

ii) *The end of a round tin*

iii) *The shape of a circle in a pattern or a poster I can see*

} *Answers will vary but here are some examples.*

2. Draw lines to match the following circle definitions to their names and their place on the diagram:

diameter

radius

circumference

A line from the centre of the circle to any point on the circle

The perimeter of the circle (distance right around the circle)

A line that goes from one side of the circle to the other while passing through the circle centre

C

3. Fill in the blanks in the following sentences:

i) *perimeter*

ii) *circumference*

4. Circle which of the following units that may be used to measure the circumference of a circle:

(km)   litre   cm²   (m)   m³   (mm)   degree

second   distance   (cm)   (millimetre)   kg   cubic-centimetre   angle

5. The Greek letter π is used to describe which of the following ratios:

A. Radius/Diameter   B. Circumference/Diameter   C. Diameter/Circumference
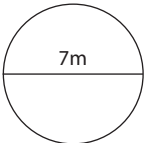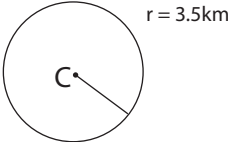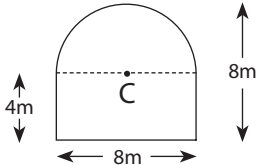
D. Circumference/Radius   E. Radius/Circumference

6. Explain what it means when we say that π is an irrational number:

It cannot be exactly written as a fraction or a decimal. When we try to write it as a decimal it just goes on forever and there isn't even a pattern in the decimal numbers.
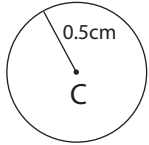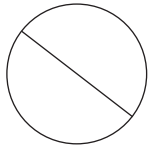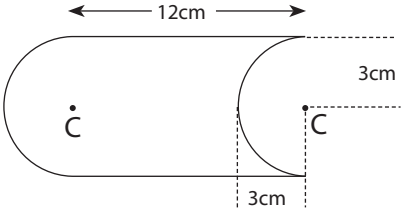
7. Draw an arrow to indicate where the π button is located on this calculator:

8. Show your working in order to calculate the exact answer for the distance around the following shapes:

a) 7m	$C = \pi \times D$ $\quad = 7\pi$ m
b) r = 3.5km	$C = 2\pi r$ $\quad = 2 \times \pi \times 3.5$ $\quad = 7\pi$ km
c) 4m, 8m, 8m	$C = \pi \times D$ $\quad = 8\pi$ mm **Distance around curve of semi-circle = C ÷ 2** $\quad = 4\pi$ m $P = 4\pi + 4 + 8 + 4$ $\quad = (4\pi + 16)$ m

9. **Show your working in order to calculate an approximate answer for the distance around the following shapes:**

a) 0.5cm C	$C = 2\pi r$ $= 2 \times 3.1416 \times 0.5$ $= 3.14$ cm
b) $d = 14$mm	$C = \pi \times D$ $= 3.1416 \times 14$ $= 43.98$ mm
c) 12cm 3cm C C 3cm	$C = 12 + 12 + 2\pi r$ $= 24 + 2 \times 3.1416 \times 3$ $= 42.85$ cm