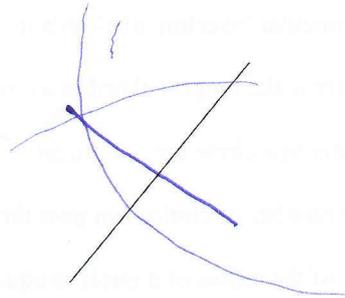
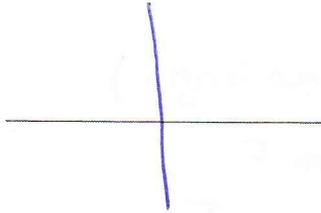
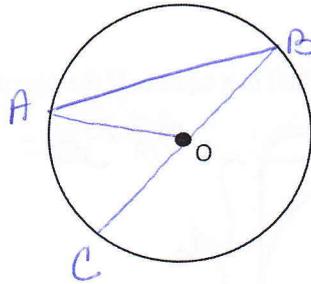


1. Construct the perpendicular bisector of each of the following line segments.



2. In this circle with centre O, draw:

- a) Chord AB ✓
- b) Diameter BC ✓
- c) Radius OA ✓



3. What is the diameter of a circle if the radius measures:

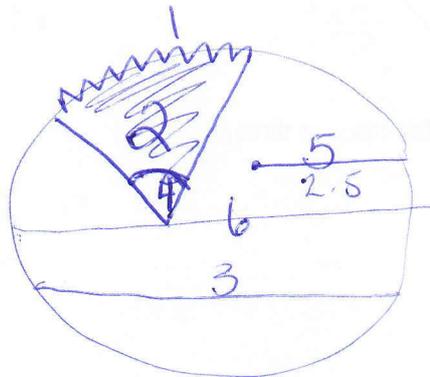
- a) 0.9 dm? 1.8
- b) 32 mm? 64
- c) 5 cm? 10

4. What is the radius of a circle if the diameter measures:

- a) 50 mm? 25
- b) 4 cm? 2
- c) 6.2 dm? 3.1

5. Draw a circle to the right, with a radius of 2.5cm.
Draw and label the following parts:

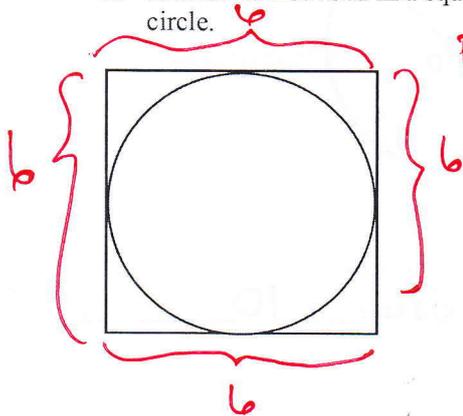
- 1. Arc
- 2. Sector
- 3. Chord
- 4. Central angle
- 5. Radius of 2.5 cm
- 6. Diameter



1. True or False?

- a) The perpendicular bisectors of chords in a circle all meet at the centre of the circle. **T**
- b) The diameter is the longest chord in a circle. **T**
- c) All diameters in a circle are congruent. **T** (all the same length)
- d) An infinite number of circles can pass through three non-aligned points. **F**
- e) The length of the radius of a circle is equal to half the length of the diameter. **T**

2. A circle is inscribed in a square. If the square has a perimeter of 24 cm, determine the length of the radius of the circle.



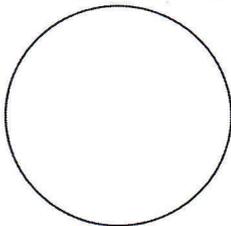
$$\text{Per Sq} = \frac{24 \text{ cm}}{4} = 6$$

$$\text{*Length of 1 side} = d = \frac{6}{2} = 3$$

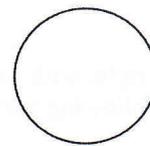
$$\underline{r = 3}$$

3. Use two chords and the perpendicular bisectors of these chords to find the centre of each circle.

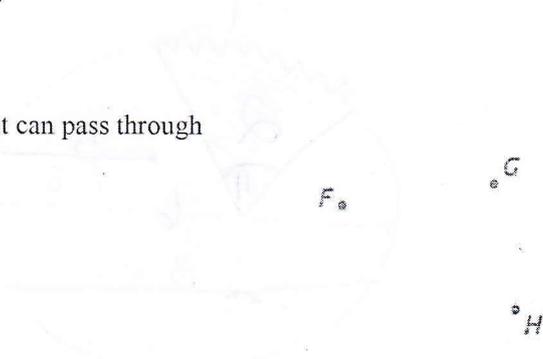
a)



b)



4. Draw the only circle that can pass through these three points.

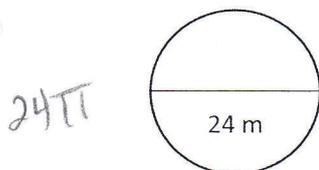


1. Calculate the missing measure.

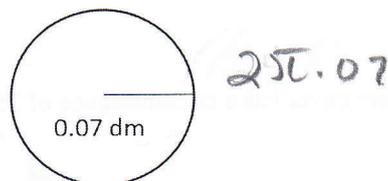
Circumference	335 cm	37.69	25.13	48 cm
Diameter	$d = 335/\pi = 106.63$	12 cm	8	15.27
Radius	$r = \frac{335}{2\pi} = 53.31$	6	4 cm	7.63

2. Calculate the circumference of each hoop using the given measurements.

a)



b)



3. Give the radius of a compact disc with a circumference of 37.7 cm.

$$r = \frac{37.7}{2\pi} = 6 \text{ cm}$$

4. Find the diameter of a tree base with a circumference of 90 cm.

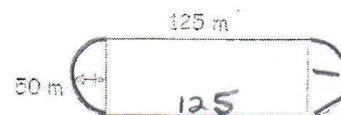
$$\frac{90}{\pi} = d = 28.65 \text{ cm}$$

5. Each straight stretch of a track measures 125m. The semicircles at each end have a radius of 50m. Calculate the distance covered by a runner travelling around the length of the track.

$$C = 2\pi r$$

$$C = 2\pi \cdot 50$$

$$250 + 314.16 = 564.16 \text{ cm}$$



6. A bicycle wheel has a radius of 28cm. what distance will the bicycle have covered after 50 rotations of the wheel?

$$C = (2\pi \cdot 28) \times 50 = 8796.46$$

1. What is the circumference of a round table with a diameter of 1.5m?

$$C = \pi d = \pi 1.5 = 4.71$$

2. A round sewer cover has a circumference of 250 cm. What is the diameter?

$$d = \frac{C}{\pi} = \frac{250}{\pi} = 79.58$$

3. A dartboard has a circumference of 94 cm. what is its radius?

$$r = \frac{C}{2\pi} = \frac{94}{2\pi} = 14.96$$

4. The radius of a pizza is 6cm. What is the length of the pizza crust?

$$C = 2\pi r = 2\pi 6 = 37.7$$

5. The wheels of a bicycle have a diameter of 70cm. How many full rotations do the wheels have to make in order to cover a distance of 500m? (Km, Hm, Dam, M, Dm, Cm, Mm)



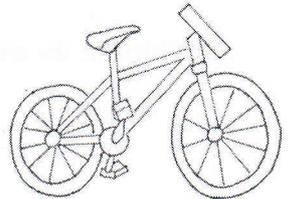
$$C = d\pi$$

$$70\pi$$

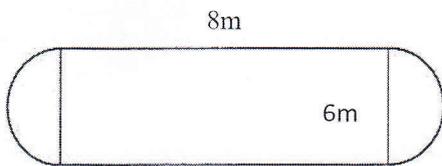
$$219.9 \text{ cm}$$

$$100 = 2.199 \text{ m}$$

$$\frac{500 \text{ m}}{2.199} = 228 \text{ rot.}$$



6. A section of a pool is 8m long. The semi-circle at each end has a diameter of 6m. Calculate the perimeter of the pool.



$$8 + 8 = 16$$

$$+ 18.85$$

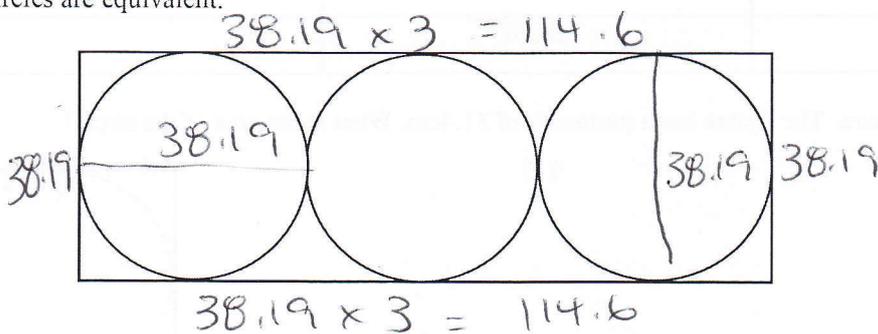
$$34.85 \text{ m}$$

$$C = \pi d$$

$$\pi 6$$

$$18.85$$

7. Calculate the perimeter of the rectangle in the figure below if the circumference of one circle is 120cm. Notes, the circles are equivalent.



$$d = \frac{120}{\pi} = 38.19$$

$$P = 114.6 + 114.6 + 38.19 + 38.19 = 305.58 \text{ cm}$$