

Circle Theorems: Angles in the same segment

Maths

Mr Chan

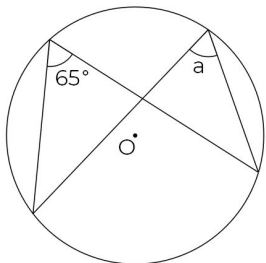


Circle Theorems: Angles in the same segment

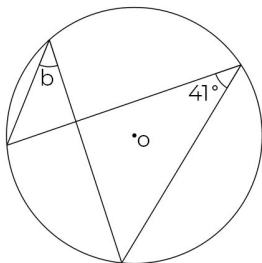
1. Work out the size of each angle marked with a letter.

Give a reason for your answers.

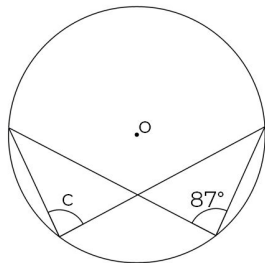
a)



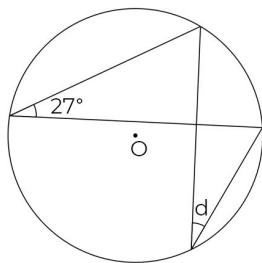
b)



c)



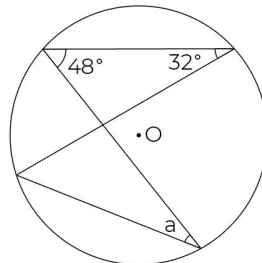
d)



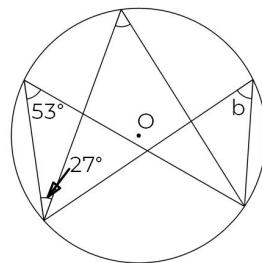
2. Work out the size of each angle marked with a letter.

Give a reason for your answers.

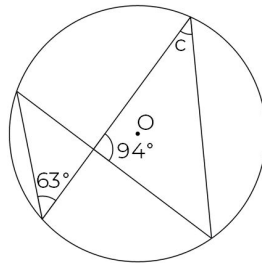
a)



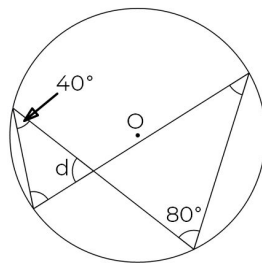
b)



c)

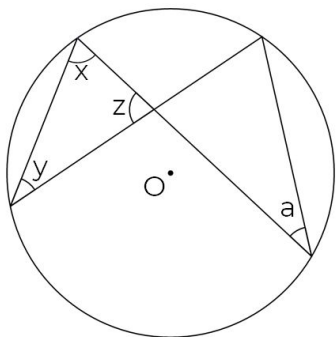


d)



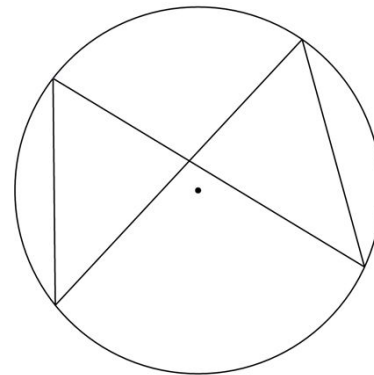
Circle Theorems: Angles in the same segment

3. a) Work out the size of angle a.

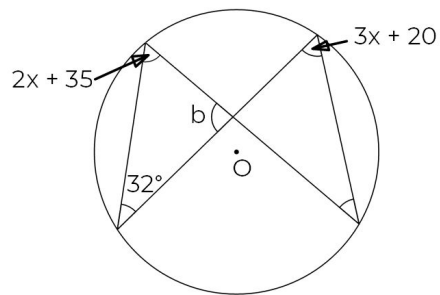


$$x:y:z = 3:2:4$$

4. Prove that angles in the same segment are equal.



b) Work out the size of angle b.



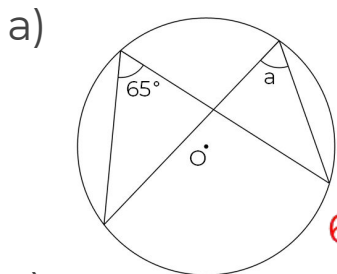
Answers



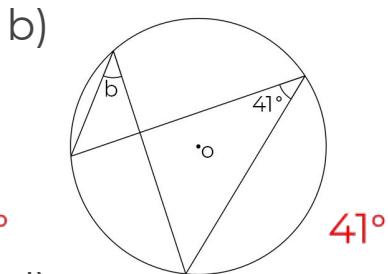
Circle Theorems: Angles in the same segment

1. Work out the size of each angle marked with a letter.

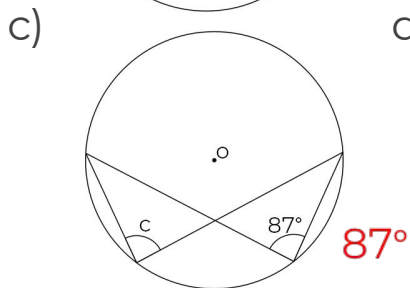
Give a reason for your answers.



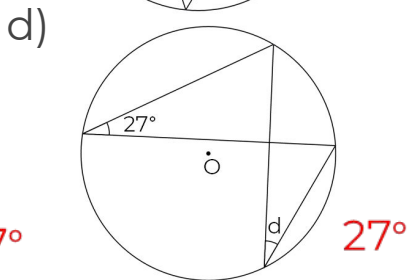
65°



41°



87°

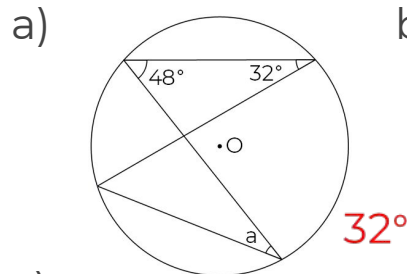


27°

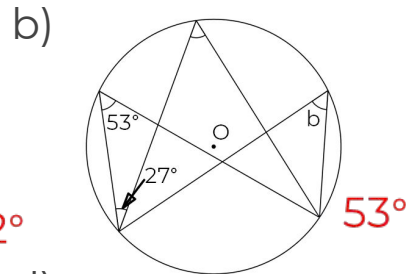
Angles in the same segment are equal.

2. Work out the size of each angle marked with a letter.

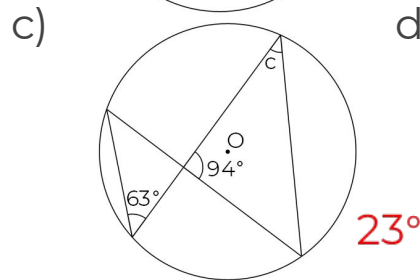
Give a reason for your answers.



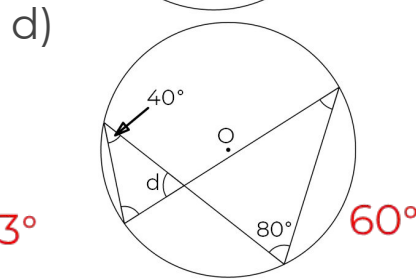
32°



53°



23°



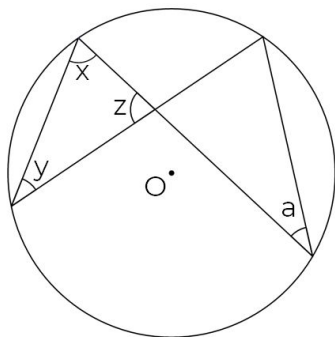
60°

Angles in the same segment are equal.



Circle Theorems: Angles in the same segment

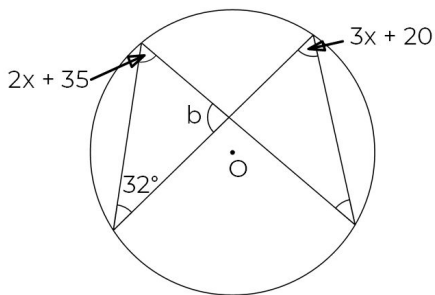
3. a) Work out the size of angle a.



$$x:y:z = 3:2:4$$

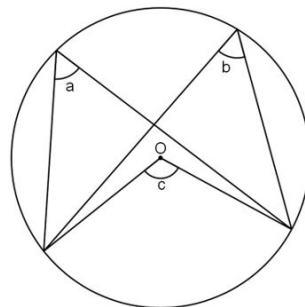
20°

b) Work out the size of angle b.



83°

4. Prove that angles in the same segment are equal.



angle a and angle b are subtended from the same chord

angle c is subtended from the same chord at the centre

angle $c = 2 \times$ angle a (angle at the centre is twice the angle at the circumference)

angle $c = 2 \times$ angle b (angle at the centre is twice the angle at the circumference)

$2 \times$ angle a = $2 \times$ angle b

angle a = angle b

