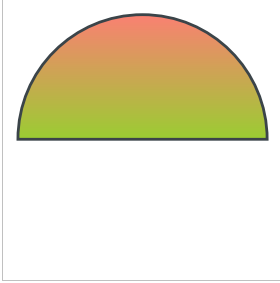




This is level 5; the radius and angle subtended at the centre of the circle are given, find the length of the arc or area of the sector of the circle. Give your answers correct to three [significant figures](#). You can earn a trophy if you get at least 7 correct. The diagrams are not drawn to scale.



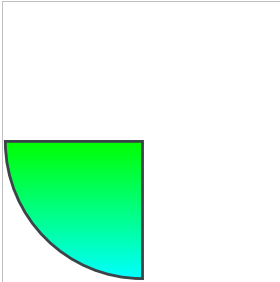
This is a semicircle. It is exactly half of a circle and has a diameter of 17.8cm. Find the area of this semicircle.

Working:

$$r=8,9$$
$$P=r^2*\pi/2$$

124 cm² ✓

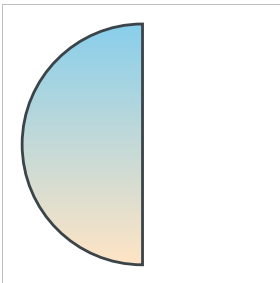
.....



This is exactly a quarter of a circle and has a radius of 9.8cm. Find the area of this shape.

75.4 cm² ✓

.....



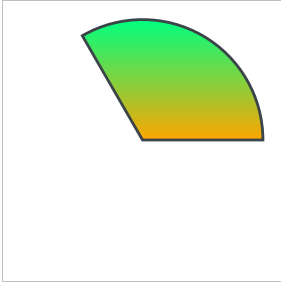
Calculate the perimeter of this semicircle which has a radius of 8.6cm.

The perimeter is the distance around the shape. You will need to add the length of the half circumference to the straight side (which is a diameter).

Периметарот на фигурата ќе биде еднаков на половина од периметарот на кругот плус дијаметрот

44.2 cm ✓

.....

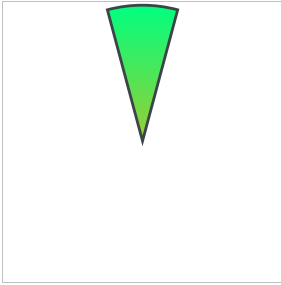


Calculate the perimeter of this shape which is exactly one third of a circle with a radius of 8.6cm.

Третина од периметарот на кругот плус два радиуси

35.2 cm ✓

.....

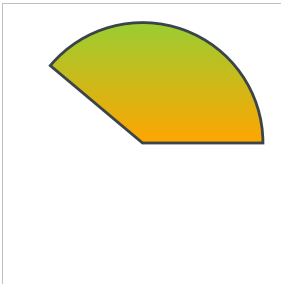


These shapes are called sectors. The curved side, part of the circumference of the whole circle, is called an arc. To calculate the length of the arc you will need to know the angle between the two straight sides of the sector.

Calculate the arc length subtended by an angle of 30° and a radius of 9.7cm.

5.08 cm ✓

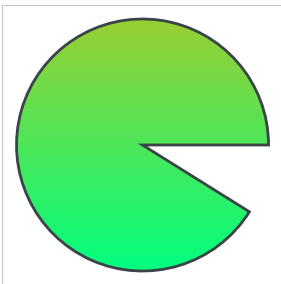
.....



Calculate the arc length subtended by an angle of 140° and a radius of 8.6cm.

21.0 cm ✓

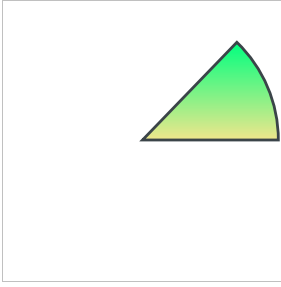
.....



Calculate the area of the sector with an angle of 328° and a radius of 9cm.

232 cm² ✓

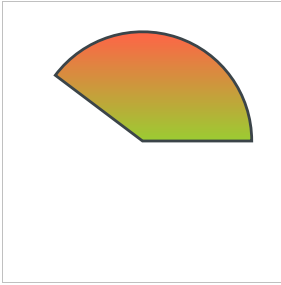
.....



Calculate the area of the sector with an angle of 46° and a radius of 9.7cm.

37.8 cm² ✓

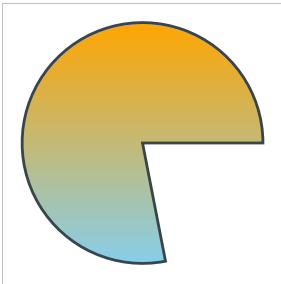
.....



Calculate the perimeter of the sector subtended by an angle of 143° and a radius of 7.8cm.

35.1 cm ✓

.....



Calculate the perimeter of the sector subtended by an angle of 281° and a radius of 8.6cm.

59.4 cm ✓

.....