

Arc Length and Sector Area *fluency*



Find the arc length to 1 decimal place. The radius r and the angle of the sector are given.

1 $r = 6 \text{ cm}, 60^\circ$

2 $r = 10 \text{ cm}, 45^\circ$

3 $r = 4 \text{ cm}, 120^\circ$

4 $r = 9 \text{ cm}, 80^\circ$

5 $r = 12 \text{ cm}, 150^\circ$

6 $r = 5 \text{ cm}, 100^\circ$



Find the area of the sector to 1 decimal place

7 $r = 6 \text{ cm}, 60^\circ$

8 $r = 10 \text{ cm}, 45^\circ$

9 $r = 4 \text{ cm}, 120^\circ$

10 $r = 8 \text{ cm}, 35^\circ$

11 $r = 12 \text{ cm}, 150^\circ$

12 $r = 5 \text{ cm}, 72^\circ$



Find the arc length (arc) or the sector area (area) in terms of π

13 arc, $r = 9 \text{ cm}, 40^\circ$

14 area, $r = 6 \text{ cm}, 90^\circ$

15 arc, $r = 12 \text{ cm}, 45^\circ$

16 area, $r = 10 \text{ cm}, 72^\circ$

17 arc, $r = 8 \text{ cm}, 135^\circ$

18 area, $r = 3 \text{ cm}, 240^\circ$



Find the perimeter of the sector to 1 decimal place

19 $r = 6 \text{ cm}, 60^\circ$

20 $r = 10 \text{ cm}, 90^\circ$

21 $r = 4 \text{ cm}, 120^\circ$

22 $r = 7 \text{ cm}, 50^\circ$

23 $r = 15 \text{ cm}, 24^\circ$

24 $r = 5 \text{ cm}, 200^\circ$



The radius and the arc length (arc) or area are given. Find the angle of the sector.

25 $r = 6 \text{ cm}, \text{arc } 2\pi \text{ cm}$

26 $r = 9 \text{ cm}, \text{area } 27\pi \text{ cm}^2$

27 $r = 10 \text{ cm}, \text{arc } 5\pi \text{ cm}$

28 $r = 4 \text{ cm}, \text{area } 6\pi \text{ cm}^2$

29 $r = 12 \text{ cm}, \text{arc } 10\pi \text{ cm}$

30 $r = 6 \text{ cm}, \text{area } 3\pi \text{ cm}^2$