

Year 6 Homework Answers

**Module 5: Introduction to circles**

1.

False
True
False
True
False

2.

Radius: 8 cm	Radius: 4 cm
Circumference: $16\pi$ cm	Circumference: $8\pi$ cm

3.

Radius	Diameter	Circumference
5 cm	10 cm	$10\pi$ cm
6 cm	12 cm	$12\pi$ cm
3 m	6 m	$6\pi$ m
9 cm	18 cm	$18\pi$ cm
15 mm	30 mm	$30\pi$ mm
7 cm	14 cm	$14\pi$ cm

4.

$24\pi$ mm	$26\pi$ cm	$12\pi$ m
$20\pi$ mm	$10\pi$ cm	$10\pi$ cm

5.

Radius	7.5 cm	12 cm	41 mm	15mm	17 mm	6.5 m
Diameter	15 cm	24 cm	82 mm	30 mm	34 mm	13 m

6.

$32 + 16 \pi \text{ cm}$	$8 + 4 \pi \text{ cm}$	$22 + 11 \pi \text{ cm}$
$128 \pi \text{ cm}^2$	$8 \pi \text{ cm}^2$	$60.5 \pi \text{ cm}^2$

7.

$16 \pi \text{ cm}^2$	$289 \pi \text{ cm}^2$	$49 \pi \text{ cm}^2$
$9 \pi \text{ cm}^2$	$30.25 \pi \text{ cm}^2$	$169 \pi \text{ cm}^2$

8.

$$15 \times 2 = 30 \text{ cm}$$

9.

Diameter: 26 cm

Circumference:  $26 \pi \text{ cm}$

10.

$$C = \pi * d = 7 \pi$$

$$7 \pi \times 6 = 42 \pi \text{ meters}$$

11.

$$C = \pi * d = \pi \times 400 = 400 \pi$$

$$400 \pi \times 10 = 4000 \pi = 4000 \times 3.14 = 12560 \text{ meters}$$

12.

$$C = \pi * d = 36 \pi$$

$$d = 36 \text{ m}$$

$$r = 36 \div 2 = 18 \text{ m}$$

13.

$$A = \pi r^2 = \pi \times 14^2 = 196 \pi \text{ cm}^2$$

$$196 \pi \div 7 = 28 \pi \text{ cm}^2/\text{slice}$$

14.

$$A = \pi r^2 = \pi \times 14^2 = 196 \pi \text{ cm}^2$$

15.

$$d = 25 \times 50 = 1250 \text{ cm}$$

$$C = \pi * d = 1250\pi = 1250 \times 3.14 = 3925 \text{ cm} = 39.25 \text{ m}$$