

**Math Essentials 10 Teacher Learning Centre
Answer Links**

<Section 5.1 Answers>

Answers to Activity Questions (pages 104–107)

1. c) centre
2. a) diameter
3. d) radius
4. b) circumference
5. a) 2
b) $\frac{1}{2}$
c) 2:1
d) 1:2
e) 2:1
6. a) $d = 6$ cm, $r = 3$ cm
b) $d = 2$ cm, $r = 1$ cm
c) $d = 3$ cm, $r = 1.5$ cm
7. a) $r = 2$ cm, $d = 4$ cm
b) $r = 2.5$ cm, $d = 5$ cm
c) $r = 0.5$ cm, $d = 1$ cm
8. twice or double, 2 or $2 \times$
9. a) $r = 2.5$ m
b) 5 m
10. 90 cm, 60 cm, 90 cm + 60 cm = 150 cm

<Section 5.2 Answers>

Answers to Activity Questions (pages 108–111)

1. Answers may vary depending on the objects used. Examples:
 - a) Coffee cup, 22 cm, 7 cm, 3.14
 - b) Water bottle, 20 cm, 6 cm, 3.33
 - c) Moisturizer cap, 14 mm, 4.5 mm, 3.11
 - d) Highlighter, 8 mm, 2.5 mm, 3.20
 - e) White correction fluid, 9 mm, 2.9 mm, 3.10
 - f) Glue stick, 6.5 mm, 2.1 mm, 3.10
 - g) Tin can, 31 cm, 9.9 cm, 3.13
2. b) See question 1 above.
3. a) See question 1 above.
 - b) Answers may vary slightly. 3.1 : 1
 - c) 3
4. a) $d = 4$ cm, $C \doteq 3 \times 4$ cm = 12 cm
 - b) $d = 3.5$ cm. $C \doteq 10.5$ cm
5. a) $C = 3.14 \times 8$ cm = 25 cm
 - b) $C = 3.14 \times 2$ mm = 6 mm
 - c) 13 cm
 - d) 11.3 cm
6. a) $r = 4$ cm, $d = 2 \times 4$ cm = 8 cm,
 $C \doteq 3 \times 8$ cm, = 24 cm
 - b) $r = 1$ mm, $d = 2$ mm, $C = 6$ mm
7. a) $r = 3.4$ m, $d = 6.8$ m, $C = 21.4$ m
 - b) $r = 50$ m, $d = 100$ m, $C = 314$ m
8. 62.8 cm to 78.5 cm

<Section 5.3 Answers>

Answers to Activity Questions (pages 113–114)

1. a) 3.14
 - b) 3.1416
2. Calculator screen displays are shown to 10 digits.
 - a) 12.56, 12.56 cm, 12.56637061, 12.57 cm
 - b) 16.014, 16.01 m, 16.02212253, 16.02 m
 - c) 10.99, 10.99 mm, 10.99557429, 11.00 mm

3. a) 0.01
b) Example: measuring a large object such as a swimming pool
c) Example: measuring a very small object such as the tip of a roller ball pen
4. 31.4 cm
5. 1 m

<Section 5.4 Answers>

Answers to Activity Questions (pages 116–119)

1. a) 7.6 cm, 23.9 cm
b) 39.3 cm
c) 70.7 cm
d) 25.1 cm
2. Using the pi button on a calculator:
a) 1.1 m, 6.9 m
b) 150.8 cm
c) 25.1 mm
d) 287.1 cm
3. a) top rim
b) by about 1.5 times
c) Top rim: 34.6 cm; Bottom rim: 22 cm
d) Example: My estimate is close.
4. Using 3.14 for pi:
a) $C = 2\pi r$, 5 cm, 31.4 cm, 31.4 cm
b) $C = 2\pi r$, 47.1 mm, 47.1 mm
c) $C = 2\pi r$, 67.196 m, 67.2 m
d) $C = \pi d$, 6.28 m, 6.3 m
e) $C = \pi d$, 9.734 km, 9.7 km
f) $C = \pi d$, 2.669 mm, 2.7 mm
5. $C = 18.84$ cm, half,
 $C \div 2 = 18.84 \text{ cm} \div 2 = 9.42$ cm
6. 3.14 m
7. 9.42 m
8. 78.5 cm

<Chapter 5 Review Answers>

Answers to Chapter 5 Review (pages 120–121)

1. a) circumference
b) radius
c) diameter
d) centre
2. a) d
b) r
c) C
d) π
3. a) 6 cm, 12 cm
b) 8.2 cm, 16.4 cm
c) 0.25 m, 0.5 m
4. Examples:
a) 12 cm
b) 15 m
5. Using 3.14 for pi:
a) 12.56 cm
b) 16.70 m
6. a) 69.1 cm
b) 46.5 cm
c) 37.7 mm
7. 189 cm