Practice
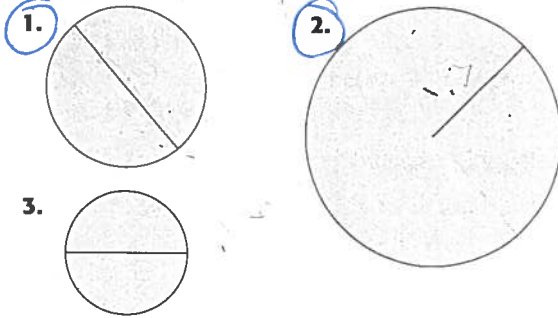
Round each answer to the nearest hundredth.

Measure each radius or diameter and calculate the circumference of each circle.
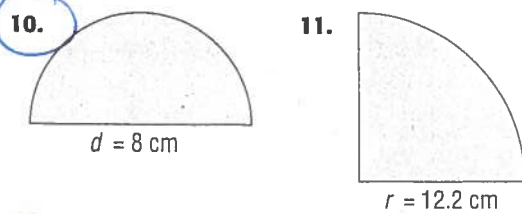
1.

2.

3.

Calculate the circumference of each circle.

4. $r = 5.5$ cm

5. $d = 8.35$ cm

6. $d = 15$ cm

7. $r = 2.8$ m

8. $r = 23$ cm

9. $d = 19.2$ cm

Problems and Applications

Calculate the perimeter of each figure.

10.
$d = 8$ cm

11.
$r = 12.2$ cm

12. How much longer is the circumference of a quarter than the circumference of a dime?

$d = 23.9$ mm

$d = 18$ mm
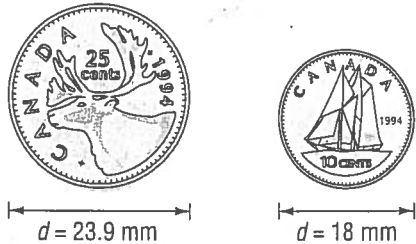
13. The diameter of the clock face of Big Ben in London, England, is 7.1 m. What is the circumference of the clock face?

14. Penny-farthing bicycles were popular in Victorian times. A penny-farthing had a large front wheel, radius about 65 cm, and a small back wheel, radius about 25 cm.
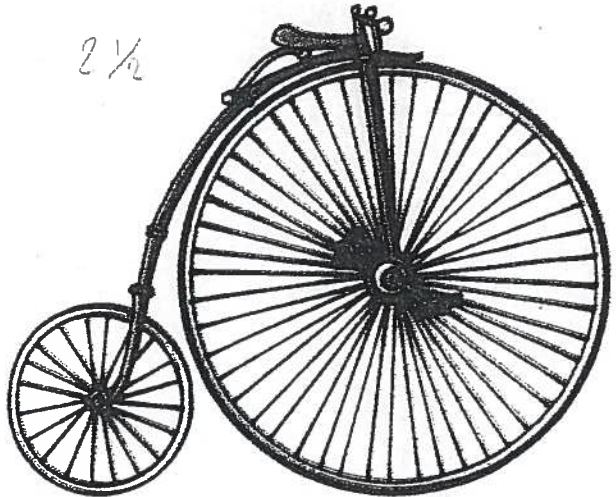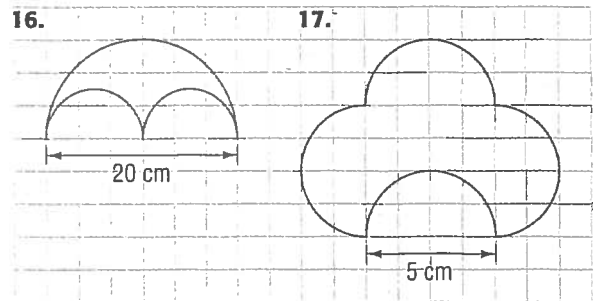

a) How many times did the back wheel turn for each turn of the front wheel?

b) How many times did the front wheel turn to travel 1 km?

15. What happens to the circumference of a circle in each of these situations? Use examples to explain your answers.

a) The radius is doubled.

b) The diameter is doubled.

Calculate the perimeter of each figure.

16.
20 cm

17.
5 cm

18. Create a design using circles, semicircles, and quarter circles. Exchange designs with a classmate and calculate the perimeters of each other's designs.

4.3 Circumference of a Circle

MATHPOWER™ *Eight*, pp. 142–143

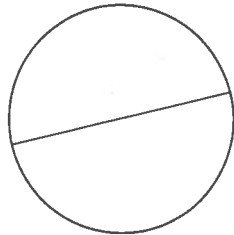The perimeter of a circle is called the **circumference**.

The distance across a circle through the centre of the circle is called the **diameter**.

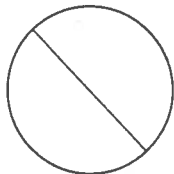The formula used to calculate the circumference is $C = \pi \times d$.

Use $\pi = 3.14$.

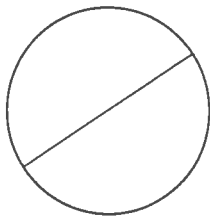*Measure the diameter of each circle and calculate the circumference, to the nearest tenth.*

1. $d =$ _____

   $C =$ _____

2. $d =$ _____

   $C =$ _____

3. $d =$ _____

   $C =$ _____

Calculate the circumference of each circle.

4. $d = 9.5$ cm

   $C =$ _____

5. $d = 28$ cm

   $C =$ _____

6. $r = 6.8$ cm

   $C =$ _____

7. $r = 3.4$ m

   $C =$ _____

8. $d = 17.8$ cm

   $C =$ _____

9. $r = 7.25$ cm

   $C =$ _____

10. The circumference of each circle is 40.82 cm. What is the perimeter of the triangle?

_____
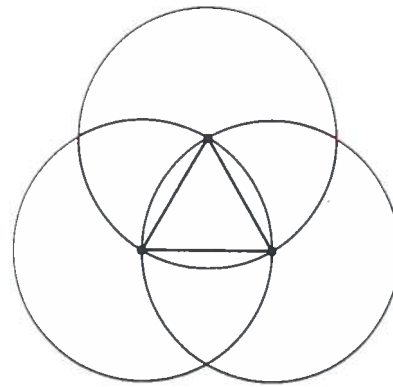
11. The diameter of a quarter is 23.9 mm. Find the circumference.

_____

12. The circumference of a dime is 56.52 mm. Find the diameter.

_____

13. The largest tires ever manufactured measured 3.7 m in diameter. What was the circumference of each tire?

_____

14. The first Ferris wheel was erected in 1893 at the Chicago World's Fair. It measured 240.8 m in circumference. Find the diameter, to the nearest tenth of a metre.

_____