

Name: \_\_\_\_\_

Date: \_\_\_\_\_

# 8.3

## Area of a Circle

MathLinks 7, pages 280–286

### Key Ideas Review

Choose from the following terms to complete #1.

- area
- diameter
- radius

1. Complete each statement.

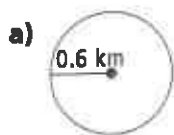
- a) The area of a circle is approximately three times the square of its \_\_\_\_\_.
- b) The formula often used to find the area of a circle is pi times the \_\_\_\_\_ squared.
- c) \_\_\_\_\_ is measured in square units.

### Practise and Apply

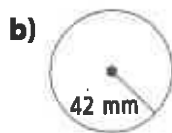
Use 3.14 for  $\pi$  in the calculations in this section.

Round all answers to the nearest tenth of a unit unless otherwise specified.

2. Estimate the area of each circle.

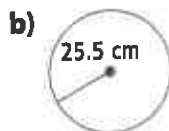
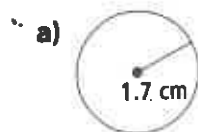


Estimate: \_\_\_\_\_



Estimate: \_\_\_\_\_

3. Calculate the area of each circle.



4. Estimate and then calculate the area of each circle.



Estimate: \_\_\_\_\_

Calculation: \_\_\_\_\_

Name: \_\_\_\_\_

Date: \_\_\_\_\_

b)



Estimate: \_\_\_\_\_

Calculation: \_\_\_\_\_

*Round all answers to the nearest hundredth of a unit for #5 to #9.*

5. Calculate the area of each circle.

a)



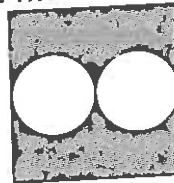
b)



6. A face-off circle in a hockey rink has a diameter of 9.14 m. Calculate the area of the circle. Show your thinking.

7. A circular swimming pool has a diameter of 8 m. What is the minimum size of pool cover that you would need? Show how you know.

8. What is the area of both circles if the side of the square measures 12 m?



9. Which circle is smaller, a circle with a radius of 35 cm or a circle with a diameter of 60 cm? Show how you know.