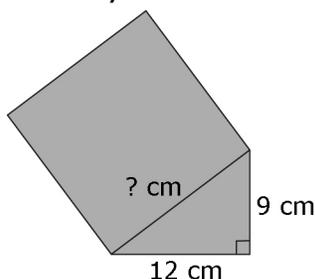
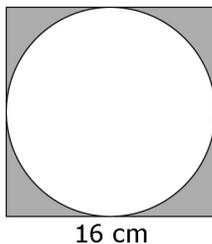


## Section 3.4 Extra Practice

- What is the volume of a cube with a side length of 4 cm? Show your work.
- A colony of bacteria triples every hour. There are 30 bacteria now. How many will there be after each amount of time? Show your work.
  - 1 h
  - 3 h
  - 12 h
  - $n$  h
- What is the surface area of a cube with a side length of 6 cm? Show your work.
- Find the side length of the square attached to the hypotenuse in the diagram. Show your work.



- The diagram shows a circle inscribed in a square with a side length of 16 cm. What is the area of the shaded region? Give your answer to the nearest hundredth of a square centimetre. Show your work.



- The combination for one type of bike lock has four numbers, from 0 to 9. The smallest combination is 0000, and the largest combination is 9999. How many number combinations are possible?
  - Express the answer as repeated multiplication and as a power.
  - Calculate the answer.
- In the formula,  $d = 4.9t^2$ ,  $d$  is the total distance, in metres, and  $t$  is the time, in seconds, that the skydiver free falls. Calculate the distance the skydiver falls in the following times. Show your work.
  - 2 s
  - 4 s
- A cylinder has a radius of 7 cm and a height of 12 cm. Calculate its surface area. Give your answer to the nearest hundredth of a square centimetre. Show your work.