**Chapter 3 Powers and Exponents – Worksheets**

DAY 7: SOLVING PROBLEMS WITH EXPONENTS

1. What is the volume of a cube with a side length of 5 cm?

2. A colony of bacteria triples every hour. There are 30 bacteria now. How many will there be after each amount of time?

a) 1 h    b) 3 h

c) 12 h d) *n* h

3. What is the surface area of a cube with a side length of 6 cm?

4. A right triangle has two shorter sides that measure 8 cm and 15 cm. What is the area of a square attached to the hypotenuse of the right triangle?

8 cm

15 cm

5. The diagram shows a circle inscribed in a square with a side length of 25 cm. What is the area of the shaded region? Give your answer to the nearest hundredth of a square centimetre.

25 cm

6. 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.

ANSWER KEY

**Day 7: Solving Problems with Exponents**

1. 125 cm3

2. a)  b)  c)  d) 

3. 216 cm2

4. 289 cm2

5. 134.38 cm2