Word Problems Involving Powers

Name: _____ Date: _____

Instructions: Read each problem carefully. Show your working and write your answer in the space provided.

1. A bacteria colony doubles every hour. If there are initially 5 bacteria, how many bacteria will there be after 6 hours? (Write your answer as a power, then calculate the total.)

Power expression: _____

Working:

_____

_____

Answer: _____ bacteria

2. A square computer screen has a side length of 2^4 centimetres. What is the area of the screen in square centimetres?

Working:

_____

_____

Answer: _____ cm^2

3. A company's profits triple each year. If they made $2,000 in the first year, how much profit will they make in the 4th year? (Express as a power first.)

Power expression: _____

Working:

_____

_____

Answer: $_____

4. A cube has edges that are 5 cm long. What is the volume of the cube? (Remember: Volume = side × side × side)

Power expression: _____

Working:

_____

Answer: _____ cm^3

5. A chain letter is sent to 4 people. Each of those people sends it to 4 more people, and this continues for 3 rounds. How many people receive the letter in the 3rd round?

Power expression: _____

Working:

_____

Answer: _____ people

6. A video goes viral on social media. On the first day, 10 people view it. Each day after that, the number of viewers is multiplied by 10. How many people will view it on the 5th day?

Power expression: _____

Working:

_____

Answer: _____ people