Name Period

Sec1

HW 3-1 Part 2
Writing Basic Exponential Equations

1. You are observing bacteria. You have 270 to start with and they half every day. Write an equation that would calculate how many bacteria you will have after *x* weeks.

2. Your plant is 2 inches tall right now. It grows 7 inches per week. Write an equation that would correctly calculate how long it will be in *x* weeks.

3. Write an expression that would show a flower population starting with 1 flower, doubling 3 times? (You do not need to solve)

4. A certain worm grows 1.5 inches per month. If it is four inches long now, write an equation to show how long it will be after *x* months.

   a) How long will it be after 4 months?

5. You invest 5 dollars in a company that promises to quadruple your money every year. How much money will you have after 7 years?

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6. You raise silkworms. You have 6 to start with and they triple every month. Write an equation that would calculate how many silkworms you will have after *x* months.

a) How many will you have after 6 months?

7. Write an expression that would show a rabbit population starting with 8 rabbits, doubling three times? (You do not need to solve)

8. Your hair is 30 cm long right now. It grows 1 cm per week. Write an equation to show how long it will be after x weeks.

9. A certain plant quadruples its height every month. If it is 3 inches tall when planted, how tall is it after 4 months?

$y = 1.5x + 4$	$y = 6 \cdot 3^x$	$y = 270 \cdot \frac{1}{2}^x$	10
$y = 2 + 7x$	$y = 8 \cdot 2^3$	$y = 30 + x$	$y = 1(3)^3$
768	4374	81920	

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