

## Section 3.1 Extra Practice

1. Write each expression as a power. Then, evaluate.

	Power	Evaluate
a) $6 \times 6$	_____	_____
b) $4 \times 4 \times 4$	_____	_____
c) $9 \times 9 \times 9 \times 9 \times 9$	_____	_____
d) $2 \times 2 \times 2 \times 2 \times 2 \times 2$	_____	_____

2. Write each expression as a power. Identify the base and the exponent in each power. Then, evaluate.

	Power	Base	Exponent	Evaluate
a) $5 \times 5 \times 5$	_____	_____	_____	_____
b) $1 \times 1 \times 1 \times 1 \times 1 \times 1 \times 1$	_____	_____	_____	_____
c) $7 \times 7 \times 7 \times 7 \times 7 \times 7$	_____	_____	_____	_____
d) 305	_____	_____	_____	_____

3. Write each power as repeated multiplication. Then, evaluate.

	Repeated Multiplication	Evaluate
a) $6^3$	_____	_____
b) $2^5$	_____	_____
c) $3^4$	_____	_____
d) $10^6$	_____	_____
e) $4^2$	_____	_____
f) $20^2$	_____	_____

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

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

4. Write each power as repeated multiplication. Then, evaluate.

	<b>Repeated Multiplication</b>	<b>Evaluate</b>
a) $(-2)^4$	_____	_____
b) $-2^4$	_____	_____
c) $(-4)^3$	_____	_____
d) $-4^3$	_____	_____
e) $-(-6)^3$	_____	_____
f) $-(-6)^4$	_____	_____

5. Complete the table.

<b>Repeated Multiplication</b>	<b>Exponential Form</b>	<b>Value</b>
a) $(-3) \times (-3) \times (-3) \times (-3)$		
b) $(-2) \times (-2) \times (-2) \times (-2) \times (-2)$		
c)	$(-6)^5$	
d)		-125

6. Bacteria reproduce by splitting in two. If a single bacteria divides every 20 min, how many bacteria will a single bacteria produce after 8 h?

- a) Write the answer in exponential form. \_\_\_\_\_
- b) Calculate the answer. \_\_\_\_\_
- c) What assumption did you make to answer the question?