Lesson 3.1-3.4 Check Up   Name: _____

Please show your work for each question!!

1. Complete the chart below. (3.1)

Repeated Multiplication	Power	Base	Exponent	Evaluate
a. 6×6				
b.	4^3			
c.	$(-7)^6$			
d.	-2^4			
e.				-125

2. Write each of the following expressions as a single power, then evaluate. (3.2)

                                    Single Power   Evaluate

    a. $3^4 \div 3^2$

                                _____   _____

    b. $(-5)^3 \times (-5)^2$

                                _____   _____

    c. $[(-2)^2]^3$

                                _____   _____

    d. $8^2 \div 8^2$

                                _____   _____

3. Write each of the following expressions as a product/quotient of two powers, then evaluate. (3.2)

                                      Two Powers   Evaluate

    a. $[3 \times (-4)]^2$

                                _____   _____

    b. $(4 \times 6)^2$

                                _____   _____

    c. $\left(\dfrac{2}{3}\right)^5$

                                _____   _____

    d. $\left(\dfrac{5}{8}\right)^4$

                                _____   _____

4. Evaluate each expression; SHOW YOUR WORK. (3.3)

a. $5(3)^3$	b. $6(-5)^2$
c. $4(-2^4)$	d. $-7(4^3)$
e. $(6+3)^2 - 21$	f. $[9-(-2)]^2 + (-3)^3$

5. Joseph completed the following expression incorrectly. Circle the step in which step he made his mistake and provide a correct solution. (3.3)

Step 1 $12 + (-4)^3 - [2 \times (-3)]$
Step 2 $12 + (-4)^3 - (-6)$
Step 3 $12 + 64 - (-6)$
Step 4 $76 - (-6)$
Step 5 82

Correct Solution

6. A colony of bacteria triples every hour. There are 30 bacteria now. How many will there be after (a) 3 hrs? After (b) 12 hrs? (3.4)