Master 2.3   **Extra Practice**

Lesson 2.1: What Is a Power?

1. Identify the base of each power.
   a) 6^3 **b)** 2^7 **c)** $(-5)^4$ **d)** 7^0

2. Use repeated multiplication to show why 3^5 is not the same as 5^3. (Include standard form)

3. Complete this table.

Power	Base	Exponent	Repeated Multiplication	Standard Form
4^4				
10^3				
	14	2		
			$1 \times 1 \times 1 \times 1 \times 1$	
	9			531 441
			5x5x5x5x5x5x5	

4. Write each product as a <u>power</u>, then <u>evaluate</u> (standard form).
   a) 6×6 **b)** $3 \times 3 \times 3 \times 3 \times 3 \times 3$
   c) $10 \times 10 \times 10 \times 10$ **d)** $8 \times 8 \times 8$

5. Find the missing exponent. (Show work)
   a) $7^\square = 16\ 807$ **b)** $2^\square = 32$ **c)** $2^\square = 128$ **d)** $3^\square = 81$ **e)** $9^\square = 81$

6. Find the missing base.
   a) $\_\_\_\_^3 = 64$ **b)** $\_\_\_^2 = 49$ **c)** $\_\_\_^5 = 1$ **d)** $\_\_\_^3 = 729$

7. Evaluate each of the following. What do you notice?
   a) 10^2 **b)** 10^3 **c)** 10^5 **d)** 10^6

8. Place a $<$, $>$ or $=$ in the box. (Show your calculations)

   a) $2^7 \square 6^3$ **b)** $4^3 \square 2^6$ **c)** $9^3 \square 3^5$ **d)** $7^3 \square 6^5$