Name: _____

<u>Homework (WEEK 4) Honors</u>:

TRY YOUR BEST AND SHOW ALL OF YOUR WORK! Use CUBES (circle, underline, box, evaluate, and solve) to earn full credit.

MONDAY:

Solve the following problems **without a calculator**. You <u>*MUST*</u> show your work. ***NO WORK = NO CREDIT.***

1. Place one set of parentheses in the correct place to make the statement true.
 	
   a. $12 + 12 \div 3 + 3 \cdot 4 + 4^2 = 36$
 	
   b. $12 + 12 \div 3 + 3 \cdot 4 + 4^2 = 76$
 	
   c. $12 + 12 \div 3 + 3 \cdot 4 + 4^2 = 44$
	2. Explain in complete sentences where and why Mr. Wernecke went wrong when solving this problem.
	Step 1:
	$\dfrac{(27^{\underline{0}} \cdot 8^{\underline{2}})}{2(4^2 \div 2)}$
	
	Step 2:
	$\dfrac{27 \cdot 16}{2(8 \div 2)}$
	
	Step 3:
	$\dfrac{432}{2(4)} = \dfrac{432}{8}$

3. It was a cold winter day in Charlotte with a record low of 8 degrees. When the sun went behind the clouds it dropped twelve degrees. What was the temperature at night? (Hint: Draw a number line.)
 	
3a. $4,560 \div 12 =$
	4. Evaluate:
	   a. $6^3 + 2^5 - 5^3 + 10^2 \cdot 1000^0$
	
	   b. $2^9 - 4^4 \div 2^5 \cdot 7 - 10^1 \cdot 6^0$

TUESDAY:

Directions: Solve the following problems. You <u>*MUST*</u> show your work. ***NO WORK = NO CREDIT.***

1. Solve. $\dfrac{(6 \cdot 3 - 8)^2 \div 4(5^2 \div 5)}{5^3 \div (5^2 \cdot 5)}$	2. Evaluate: $\dfrac{6^4 \cdot 7^3}{6^3 \cdot 7}$ $\dfrac{4^3 \cdot 3^3}{2^4 \div 4^0}$

3. Write out the following in expanded form and solve. 3^4
 	
Evaluate:
   a. $6^3 + 9^2$
 	
   b. $8^3 - 2^6$
	1. Evaluate.
	
	   a. $(6^2 \div 9)^3$
	
	   b. $(5^3 \div 5)^2$

WEDNESDAY

Directions: Solve the following problems. You *MUST* show your work. ***NO WORK = NO CREDIT.***

1. List the Order of Operations. Explain how it all works. Also explain why using the order of operations is important?	2. A total of $450 is divided into equal shares. If Kairy receives four shares, Trey receives three shares, and Anthony receives the remaining two shares, how much money did Trey receive?

3. Solve.
 	
  a. $(9^0 + 3)^3 - 6(72 \div 9) + 12$
 	
  b. $8 + 10 \cdot 5 - 9$
	4. Solve.
	
	  $\dfrac{12^2 - 5(3 \cdot 3 + 3)}{2}$

THURSDAY

Directions: Solve the following problems. You *MUST* show your work. ***NO WORK = NO CREDIT.***

1. Solve.
 	
  $\dfrac{(5^2 + 5 \cdot 4) + 7(3^3 \div 9)}{2^3 + 3}$
	2. List the first 10 multiples of each number:
	
	  a. 9
	
	  b. 12
	
	  c. 6

3. Simplify and solve.
 	
  a. $\dfrac{8^4 \cdot 9^3}{8^3 \cdot 9^2}$
 	
  b. $\dfrac{(6^3 - 2^4) + 3(5^0 \cdot 8)}{10 + 4 \cdot 3 - 14}$
	4. Jeremy picks up pennies every day. He picked up two pennies on the first day. He picked up twice as many pennies the next day. He picked up twice as many pennies the 3rd day as he did the 2nd day and so on. In **exponential form**, write an expression to find the number of pennies he picked up on the 8th day.

Directions: Solve the following problems. You *MUST* show your work. ***NO WORK = NO CREDIT.***

1. Using the divisibility rules, state what each number is divisible by (using the rules for 2, 3, 5, and 10) and EXPLAIN WHY.
 	
   a. 57
 	
   b. 47
 	
   c. 690
	2. Ty wrote 64 as 8 • 2. What did she do wrong?
	
	3. Write in exponential form
	
	$c \cdot c \cdot c \cdot v \cdot v \cdot v \cdot 6 \cdot 6 \cdot 6$
	
	$w \cdot w \cdot w \cdot w \cdot w \cdot w \cdot w \cdot w \cdot w$
	
	$\frac{1}{2} \cdot \frac{1}{2} \cdot \frac{1}{2} \cdot \frac{1}{2}$

4. In the list of numbers below, put a ◯ round the prime numbers and put a ▢ round the composite numbers. 11 24 33 51 27 99 91 63 31 25 43 57 1 54	5. Solve. $(6 \cdot 4 \div 3)^2 - (2^4 - 5 \cdot 2)$

Weekend **Homework**

Directions: Solve the following problems. You *MUST* show your work. ***NO WORK = NO CREDIT.***

1. Challenge: Write $(3^2)^3$ using a single exponent.	2. Write About It: Compare 10^3 and 3^{10}. For any two numbers, which usually gives the greater answer, using the larger number as the base or as the exponent? Give at least one exception.
3. Write an algebraic expression for the following: Give an example of a variable to the fifth power. The product of 4 and m to the third power.	4. In a hockey league, 87 players play on seven different teams. Each team has at least 12 players. What is the largest possible number of players on any one team? A. 13 B. 14 C. 15 D. 21