Homework 2 (7 points)
<u>**Show work or no credit!**</u>   **DUE DATE:** _____

1. Calculate the expressions
   a) $3+(5\times2)=$
   b) $(3+5)\times2=$
   c) $3+5\times2=$

   Which ones produce the same result? Which one does not produce the same answer as the others? Write a paragraph that explains why the two are the same and the third is different.

2. Calculate the expressions
   a) $(12\div4)\times3=$
   b) $12\div(4\times3)=$
   c) $12\div4\times3=$

   Which ones produce the same result? Which one does not produce the same answer as the others? Write a paragraph that explains why the two are the same and the third is different.

3. Find the values of the expressions:
   a) $5\times3=$
   b) $5\cdot3=$
   Do they produce same or different results?   Why?

4. Calculate:

    a) $5^3 =$

    b) $3^5 =$

Do they produce same or different results? Why?

5. Calculate the expressions:

    a) $\sqrt{81} =$

    b) $\sqrt[3]{27} =$

    c) $\sqrt[6]{64} =$

Write a paragraph explaining how to find the square root of a number:

6. Evaluate the expressions

    a) $10^2 =$

    b) $10^0 =$

    c) $3^4 =$

    d) $10^4 =$

    e) $2^5 =$

Write a paragraph explaining how to raise a number to a power:

7. Evaluate $\quad 2 \cdot(2+3) \cdot(6-3) \div(5^2 - 4 \times 5) - (12 \div 2 - 4)^2 \cdot 2 + (32 - 2^2 \times 3) \div 4$

8. Write the following expressions in a different way: $\quad x \cdot x \cdot x \cdot y \cdot y \ =$

$\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\quad x + x + x + y + y \ =$

In the abbreviated expressions what are the numerals called? (x and y are called "variables")

9. Evaluate $\quad 5(3^2 - 2^2) + 3^4(5^2 - 2^4)^2 - (10^2 - 9^2) =$

10. Change the plus sign in problem #9 to a minus, and re-evaluate. (SHOW WORK)

11. Calculate:

     a) $2^3 =$

     b) $(-2)^3 =$

Do they produce same or different results?   Why?

12. Calculate:

     a) $2^0 =$

     b) $(-2)^0 =$

Do they produce same or different results?   Why?

13. Calculate:

a) $(-2)^4 =$

b) $(-2)^4 =$

Do they produce same or different results? Why?

14. Write a paragraph explaining how to raise a negative number to a power:

15. Find the hypotenuse of a right triangle with legs 9cm and 40cm.

16. Find the leg of a right triangle if its other leg is 16in long and its hypotenuse is 34in long.