Name _____ Date _____

Evaluating Expressions: Order of Operations with Exponents

When you evaluate an expression—or find the total value—it's important to perform the operations in the proper order. What is the proper order?

Let me introduce you to a friend who can help you remember: PEMDAS! It's a funny name, but if you can remember it, you will always remember what to do first, next, and last.

P - Parentheses. If there are parentheses, evaluate what's in them first.
E - Exponents. If there are additional exponents, evaluate them next.
M - Multiplication. Then, multiply.
D - Division. Division comes next.
A - Addition. Addition and subtraction are done at the same time. Go left from right to determine the order.
S - Subtraction. This is the final step.

Evaluate the expressions below, paying attention to the order of operations. Show the steps. The first one has been completed for you.

1) $(8 - 4) \times 5^3 - 10$

$4 \times 5^3 - 10$

$4 \times 125 - 10$

$500 - 10$

490

2) $2^2 \times 9 + 5$

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3) $33 - (48 \div 4) + 7$

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4) $52 + (18 - 9) - 2^2$

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5) $(29 - 7) \times 7^2 + 6$

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6) $58 - (36 \div 4) + 8$

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