1) Same seats/partner as yesterday
2) Clear desk, only pencil & paper! :)

Expressions Clock Day II

Education is Not The Learning of Facts
It's Rather The Training of The Mind To Think
Expressions O'Clock

Make a clock that is at least 8.5 inches in diameter on cardstock. The hours on the clock must be an expression (that you create using the criteria below) that is equal to the hour of where that expression is located on the clock when solved correctly. (Example: The expression located at the top of the clock (in the 12th hour spot) must equal 12 when solved.) Remember: the Order of Operations ALWAYS apply.

Each expression must contain the following for each hour:

Hour 1: at least 3 different numbers & 2 different operations.
Hour 2: at least 3 different numbers, 2 different operations, & parenthesis.
Hour 3: at least 3 different numbers & 2 operations - an exponent & subtraction.
Hour 4: at least 3 different numbers (at least 1 negative) & 2 operations - multiplication & subtraction OR division & addition.
Hour 5: at least 3 different numbers (at least 1 negative) & 2 operations - multiplication & addition OR division & subtraction.
Hour 6: at least 4 different numbers (at least 2 negatives) & 3 different operations
Hour 7: at least 4 different numbers & 3 operations - division, addition, & a different operation
Hour 8: at least 4 different numbers & 3 operations - multiplication, subtraction, & a different operation
Hour 9: at least 4 different numbers (at least 1 negative), 3 different operations, & parenthesis
Hour 10: at least 4 different numbers (at least 1 negative), 3 different operations, & an exponent
Hour 11: at least 4 different numbers & 3 different operations, parenthesis, & an exponent
Hour 12: at least 4 different numbers (at least 1 fraction) & 3 different operations

*YOU CANNOT USE THE HOUR IN THE EXPRESSION. (For example, "2" may not be used in the expression for the 2 o'clock hour.

*Zero may be used a MAXIMUM of three times on the entire clock.

Assigned: expressions 5/22

Due: clocks 5/23
## Expressions O’Clock: The Work

<table>
<thead>
<tr>
<th>Hour</th>
<th>Criteria</th>
<th>Solve (Show EACH step)</th>
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</table>
| 1    | • 3 different numbers  
      • 2 different operations  
      • Must equal 1 | $9 \div 3 - 2$  
                                 $3 - 2$  
                                 $1$ |
| 2    | • 3 different numbers  
      • 2 different operations  
      • Parenthesis  
      • Must equal 2 | |
| 3    | • 3 different numbers  
      • Exponent & Subtraction  
      • Must equal 3 | |
| 4    | • 3 different numbers  
      • At least 1 negative  
      • Multiplication & Subtraction  
      • OR Division & Addition  
      • Must equal 4 | |
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| 5 | - 3 different numbers  
  - At least 1 negative  
  - Multiplication ≠ Addition OR  
    Division ≠ Subtraction  
  - Must equal 5 |
| 6 | - 4 different numbers  
  - At least 2 negatives  
  - 3 different operations  
  - Must equal 6 |
| 7 | - 4 different numbers  
  - 3 operations (Division, Addition, ≠ a different operation)  
  - Must equal 7 |
| 8 | - 4 different numbers  
  - 3 operations (Multiplication, Subtraction, ≠ a different operation)  
  - Must equal 8 |
<p>| | |</p>
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</table>
| 9 | • 4 different numbers  
   | • At least 1 negative  
   | • 3 different operations  
   | • Parenthesis  
   | • Must equal 9 |
| 10 | • 4 different numbers  
    | • At least 1 negative  
    | • 3 different operations  
    | • Exponent  
    | • Must equal 10 |
| 11 | • 4 different numbers  
    | • 3 different operations  
    | • Parenthesis  
    | • Exponent  
    | • Must equal 11 |
| 12 | • 4 different numbers  
    | • At least 1 fraction  
    | • 3 different operations  
    | • Must equal 12 |
* Expressions complete? - "peer review" help each other find & correct mistakes before I grade it... :)

* Materials - see Mrs. Curry
  - use plate to trace circle
  - fold in half, in half again
  - write expression only (not work)
  - be creative! :)

* Turn IN when complete
Continue to study module pages, module vocabulary, practice problems & use study guide in textbook... online or hardback book.

KhanAcademy too!

Use the FSA study guide booklet to help.