Math 210 - Dr. Miller - Homework #16: Number Sentence Terminology

1. Make up a Fact Family that uses the given numbers in each fact.
   (a) 4, 8, 12
   (b) 10, 2, 5
   (c) 6,0,6
   (d) one 6 and two 0s
   (e) 6,1,6
   (f) only 1s
   (g) 1,1,2
2. Write the number sentence having the given numbers in the indicated roles.
   (a) 15 and 7 are addends.
   (b) 5 is the only number used as an addend.
   (c) 17 is the sum and 8 is an addend.
   (d) 17 is the minuend and 10 is the subtrahend.
   (e) 17 is the difference and 10 is the subtrahend.
   (f) 17 is the subtrahend and 10 is the difference.
   (g) 12 and 5 are the factors.
   (h) 12 is one factor and the product is 36.
   (i) 12 is one factor and the product is 12.
   (j) 12 is one factor and the product is 0.
   (k) 3 is a factor and a product.
   (l) 15 is the quotient and 3 is the divisor.
   (m) 15 is the dividend and 3 is the divisor.
   (n) 15 is the divisor and 3 is the quotient.
   (o) 15 is a dividend and a quotient.
   (p) 12 is the divisor and the quotient is 0.
3. If possible, write a WHOLE NUMBER number sentence having the given qualities. If not possible, explain why.
   (a) One addend is twice as large as the other.
   (b) The sum is 6 times as large as one addend.
   (c) The sum is 0 and the addends are natural numbers.
   (d) The sum is 0.
   (e) The subtrahend and difference are equal.
   (f) The difference is one more than the minuend.
   (g) The difference is twice as large as the subtrahend.
   (h) One factor is 5 more than the other.
   (i) One factor is five more than the product.
   (j) 1 is the product, but it is not a factor.
   (k) 0 is the dividend.
   (l) 0 is the divisor.

1. (a) $4+8=12$ $8+4=12$ $12-8=4$ $12-4=8$
   (b) $2\times 5=10$ $5\times 2=10$ $10\div 5=2$ $10\div 2=5$
   (c) $6+0=6$ $0+6=6$ $6-0=6$ $6-6=0$
   (d) $0\times 6=0$ $6\times 0=0$ $0\div 6=0$ ($0\div 0=6$ is nonsense! Don't write it.)
   (e) $6\times 1=6$ $1\times 6=6$ $6\div 6=1$ $6\div 1=6$
   (f) $1\times 1=1$ $1\div 1=1$
   (g) $1+1=2$ $2-1=1$
2. (a) $15+7=22$
   (b) An addition sentence MUST show two addends, so 5 is used twice: $5+5=10$.
   (c) $8+9=17$
   (d) $17-10=7$
   (e) $27-10=17$
   (f) $27=17=10$
   (g) $12\times 5=60$
   (h) $12\times 3=36$
   (i) $12\times 1=12$
   (j) $12\times 0=0$
   (k) $3\times 1=3$
   (l) $45\div 3=15$
   (m) $15\div 3=5$
   (n) $45\div 15=3$
   (o) $15\div 1=15$
   (p) $0\div 12=0$
3. (a) $5+10=15$ is one example. There are many others.
   (b) $5+25=30$ is one example. There are many others.
   (c) Not possible. Natural numbers are all larger than 0. Adding such number together gives a sum that is even greater.
   (d) $0+0=0$ – now we can do it.
   (e) $12-6=6$ is one example. There are many others.
   (f) Not possible. The minuend is being decreased by a whole number, so you cannot end up with an answer that's larger than what you started with.
   (g) $12-4=8$ is one example. There are many others.
   (h) $4\times 9=36$ is one example. There are many others.
   (i) $5\times 0=0$ is the only option – did you get this one?
   (j) Not possible. The only way to write 1 as a product of WHOLE numbers (not fractions) is as $1\times 1=1$, which isn't permitted here.
   (k) $0\div 3=0$ is one example. There are many others.
   (l) Not possible: "$\_\_\_\div 0$" never makes sense no matter what number you put in the blank.