1. a) 1 + 2 + 3 + 4 + 5 + 6 + 7 =

   b) (1 + 2 + 3) + (4 + 5 + 6 + 7) =

   c) (1 + 2 + 3 + 4 + 5) + (6 + 7) =

   d) (1 + 2) + 3 + (4 + 5 + 6 + 7) =

   e) 7 + 6 + 5 + 4 + 3 + 2 + 1 =

   f) (7 + 6 + 5 + 4) + 3 + 2 + 1 =

   g) 4 + 1 + 2 + 7 + 3 + 5 + 6 =

   h) Did you get the same answer for #1a-g?

   i) What mathematical property says you can add numbers in any order?

2.   a)   2 × 3 =

     b)   -2 × 3 =

     c)   2 × -3 =

     d)   -2 × -3 =

     e)   What is the sign of the result when you multiply:

          positive × positive =

          negative × negative =

          negative × positive =

          positive × negative =

3.   Solve. Label as "identity" or "negation."

     a)   951,212 × 1 =   _____

     b)   951,212 × -1 =   _____

     c)   -951,212 × 1 =   _____

     d)   -951,212 × -1 =   _____

4.   a)   9 ÷ 3 =

     b)   -9 ÷ 3 =

     c)   9 ÷ -3 =

     d)   -9 ÷ -3 =

     e) Are the sign rules for <u>division</u> the same or
     different than multiplication (see #2e)?

5.   Solve. Label as "identity" or "negation."

     a)   1,234,567 ÷ 1 =   _____

     b)   1,234,567 ÷ -1 =   _____

     c)   -1,234,567 ÷ 1 =   _____

     d)   -1,234,567 ÷ -1 =   _____

6.   (1 + 2) ÷ 3 + 4 × 5 - (6 + 7) =

7. a) -1 + -2 + -3 + -4 + -5 + -6 + -7 =

b) -1 - 2 - 3 - 4 - 5 - 6 - 7 =

c) -1 + -1×2 + -1×3 + -1×4 + -1×5 + -1×6 + -1×7 =

d) -1 + (-1×2) + (-1×3) + (-1×4) + (-1×5) + (-1×6) + (-1×7) =

e) -1 + (2÷-1) + (3÷-1) + (4÷-1) + (5÷-1) + (6÷-1) + (7÷-1) =

8. a) -2 × -2 =

b) -2 × -2 × -2 =

c) -2 × -2 × -2 × -2 =

d) -2 × -2 × -2 × -2 × -2 =

e) What is the <u>sign</u> for multiplying an <u>odd</u> number of negative numbers?