Math 210 - Dr. Miller - Activity #6: Identifying Arithmetic Properties

1. Carefully observe the differences between left- and right-hand sides of the given number sentences below, then COMPLETELY name the property that has been used in each example (meaning you must specify the operation being altered, as in "Commutative Property of Multiplication," not just "Commutative Property.")

   (a) $(5+6)+(2+3)=(5+6)+(3+2)$

   (b) $(4+3)\cdot 5+2\cdot(6\cdot 8)=(4+3)\cdot 5+(6\cdot 8)\cdot 2$

   (c) $(4+3)\cdot 0+8\cdot 9=0+8\cdot 9$

   (d) $(4+3)\cdot 5+2\cdot(6\cdot 8)=(4+3)\cdot 5+(2\cdot 6)\cdot 8$

   (e) $(4+3)\cdot 0+8\cdot 9=(4+3)\cdot 0+8\cdot 9+0$

2. (a) Complete this number sentence to illustrate ONLY the Identity Property of Multiplication:

   $$4\cdot 5+(2+6)=\_\_\_\_\_$$

   (b) Complete this number sentence to illustrate ONLY the Associative Property of Addition:

   $$4\cdot 5+(2+6)=\_\_\_\_\_$$

   (c) Complete this number sentence in two different ways to illustrate ONLY the Commutative Property of Addition each time:

   $$4\cdot 5+(2+6)=\_\_\_\_\_$$

   $$4\cdot 5+(2+6)=\_\_\_\_\_$$