

**Advanced Geometry**  
**Arithmetic Sequence / Equation of Lines**

**Name:** \_\_\_\_\_

**Arithmetic Sequence:**

**[EX 1]** Find a general rule ( $a_n = ?$ )  
for the arithmetic sequence:  
5, 6, 7, 8, 9, 10, ....

**[EX 2]** Find a general rule ( $a_n = ?$ )  
for the arithmetic sequence:  
-5, -1, 3, 7, 11, 15, ....

**[EX 3]** Find a general rule ( $a_n = ?$ )  
for the arithmetic sequence:  
18, 16, 14, 12, 10, 8, ...

**[EX 4]** Find a general rule ( $a_n = ?$ )  
for the arithmetic sequence:  
2, 5, 8, 11, 14, 17, ...

**[EX 5]** An arithmetic sequence has the  
properties that  $a_5 = 20$  and  $a_{11} = 68$ .  
Find its general rule ( $a_n = ?$ ) and use  
this rule to find  $a_{100}$ .

**[EX 6]** An arithmetic sequence has the properties that  $a_{17} = -8$  and  $a_{24} = -36$ . Find its general rule ( $a_n = ?$ ) and use this rule to find  $a_{100}$ .

**[EX 7]** An arithmetic sequence has the properties that  $a_{271} = 950.5$  and  $a_{314} = 1101$ . Find its general rule ( $a_n = ?$ ) and use this rule to find  $a_{2011}$ .

**[EX 8]** An arithmetic sequence has the properties that  $a_{10} = 22$  and  $a_{22} = -18$ . Find its general rule ( $a_n = ?$ ) and use this rule to find  $a_{50}$ .