Essential Questions: What are consecutive integers?   How do we solve consecutive integer problems?

Do Now:

a) Name the next 3 consecutive integers after 7.   _____

b) Name the next 3 consecutive integers after -4.   _____

c) Name the next 3 consecutive **odd** integers after 3. _____

d) Name the next 3 consecutive **odd** integers after -5. _____

e) Name the next 3 consecutive **even** integers after 6. _____

f) Name the next 3 consecutive **even** integers after -8. _____

g) If n is an integer, write the next 3 consecutive integers after n.

   _____   _____   _____

h) If $n + 5$ is an integer, write the next 3 consecutive integers after $n + 5$.

   _____   _____   _____

i) If n is an even integer, write the next 3 consecutive even integers after n.

   _____   _____   _____

j) If n is an odd integer, write the next 3 consecutive odd integers after n.

   _____   _____   _____

k) If $2n - 3$ is an odd integer, write the next 3 consecutive odd integers after $2n - 3$.

   _____   _____   _____

Stop Here

1) Find two consecutive integers such that their sum is 89.

2) Find two consecutive odd integers that have a sum of 68.

3) Find three consecutive odd integers such that the sum of the first and third equals the sum of the second and 43.

4) Find three consecutive integers such that the sum of twice the second and three times the third is five less than six times the first.

8 Algebra CC   **HW#**

1. If **x** represents an integer, then the next consecutive integer in terms of x is

    (1) x   (2) x + 1   (3) x + 2   (4) x + 3

2. If **x – 8** represents an even integer, then the next consecutive even integer in terms of x is

    (1) x - 10   (2) x - 9   (3) x - 7   (4) x - 6

3. If **x + 2** represents an odd integer, then the next consecutive odd integer in terms of x is

    (1) x + 1   (2) x + 3   (3) x + 4   (4) x + 5

For #'s 4-6, set up an equation and solve algebraically.

4. Find two consecutive integers that have a sum of -67.

5. Find three consecutive integers whose sum is 9 greater than twice the largest integer.

6. Find two consecutive even integers such that twice the smaller diminished by twenty is equal to the larger.

7. Consider the problem below and analyze the equations used by Sally and Jerry to answer the question.

   Find three consecutive integers such that their sum is 42.

   Sally's Equation: $n + (n + 1) + (n + 2) = 42$

   Jerry's Equation: $(n - 5) + (n - 4) + (n - 3) = 42$

   Will Sally and Jerry arrive at the same answer? Justify your response.