

NAME: \_\_\_\_\_

# U1:L2B Switching Arithmetic Series Forms

There are two common ways to formulate arithmetic series.

- Working with  $S_n$
- Working with  $\sum n$

Knowing how to switch between the two is important.

Reminder:

**# of terms**  $S_n = \frac{n}{2} (2t_1 + (n-1)d)$  **common diff**

**First term**

$S_n = \frac{n}{2} (t_1 + t_n) \rightarrow n^{\text{th}} \text{ term}$

With the sigma formula:

**6**  $\rightarrow$  **where to end**

$(2-4n)$   $\rightarrow$  **formula for term**

$t_1$	$t_2$	$t_3$
$2-4(1)$	$2-4(2)$	$2-4(3)$
$-2$	$-6$	$-10$

$-2, -6, -10 \dots$

$d = -4$

**$n=1$**   $\rightarrow$  **Where to start**

The sigma formula does not specify the common difference.