

① For the sequence  $-7, 8, 5, -3, 12, 5, 27$

a) what is the initial term?

b) what is the final term?

② For the sequence  $\{b_i\}$  specified by an explicit formula  $b_i = (-1)^i \frac{2^i}{2i}$  for  $i \geq 3$

List the first four terms

③ For the sequence  $\{a_k\}$ , beginning with  $a_1 = 3$ :

$3, 8, 13, 18, 23, 28, 33$

a) what is  $a_5$ ?

b) what is the index of the term 13 in the sequence?

c) what is the final index of the sequence?

④ For the arithmetic sequence  $2, 9, 16, 23, 30, \dots$

a) what is the initial term?

b) what is the common difference?

c) Assume that the sequence starts with an initial index 0, find  $S_{25}$