Worksheet 8

Writing Formulae

1 Let T stand for the nth number in each pattern.

(a)

n	1	2	3	4	5
T	3	6	9	12	15

$T =$

(b)

n	1	2	3	4	5
T	5	9	13	17	21

$T =$

(c)

n	1	2	3	4	5
T	5	7	9	11	13

$T =$

(d)

n	1	2	3	4	5
T	2	7	12	17	22

$T =$

2 The formula for the nth number in a sequence is:

$$2n + 4$$

(a) Find the 4th number.

(b) Find the 15th number.

(c) Find the 100th number.

(d) Find the sum of the first 10 numbers in the sequence.

3 Evaluate each expression for the given values of n. In each case, write a formula for T in terms of n.

(a)

n	$4n + 1$
1	
2	
3	
4	
5	

(b)

n	$2n - 2$
2	
4	
6	
8	
10	

(c)

n	$3n + 5$
1	
2	
10	
20	
99	