
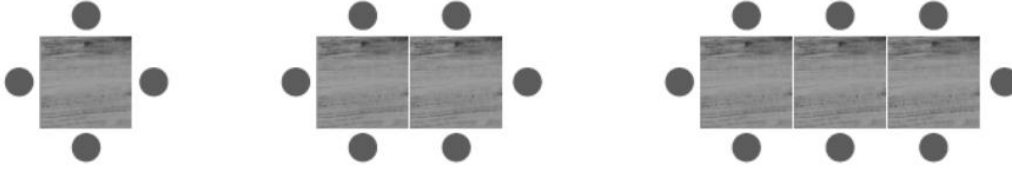


# Worksheet 7

## Writing and Evaluating Algebraic Expressions

1  made these arrangements of some square tables and round stools.



(a) Complete the table.

Arrangement number	Number of tables, $t$	Number of stools, $s$
1	1	4
2	2	6
3	3	
4	4	
6	6	

(b) Write an expression for the number of stools  $s$  in terms of the number of tables  $t$ .

$s =$

(c) Use your expression to find the value of  $s$  when  $t = 12$ .

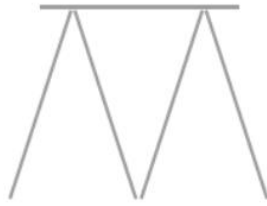
2



stacked playing cards to make these arrangements (side view shown).



Arrangement 1



Arrangement 2



Arrangement 3

(a) Complete the table.

Arrangement number, $n$	Number of playing cards, $c$
1	2
2	5
3	
5	
7	

(b) Write an algebraic expression for the number of playing cards  $c$  in terms of the arrangement number  $n$ .

(c) Evaluate your expression when  $n = 11$ .

Check that this answer is equal to the number of cards in Arrangement 11.



- 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	