

# M9 - 6.2 - Equation TOV Notes

Find the equation from the Table of Values (TOV).

Right Letter = 1,2,3 Letter

n	t
1	3
2	4
3	5

~~$t = 3n$~~   
 $t = n + 2$

- 1) Try for  $n = 1$  (Logic)
- 2) See if pattern works for  $n = 2, 3 \dots$  by Substitution
- 3) If not cross it off
- 4) Repeat until works for all  $n$ .

Check Answer

Do this in your head!

Substitute with Brackets

~~$t = 3n$~~   
 ~~$(3) = 3(1)$~~   
 ~~$3 = 3$~~  ✓

~~$t = 3n$~~   
 ~~$(4) \neq 3(2)$~~   
 ~~$3 \neq 3$~~  ✗

$t = n + 2$   
 $(3) = (1) + 2$   
 $3 = 3$  ✓

$t = n + 2$   
 $(4) = (2) + 2$   
 $4 = 4$  ✓

$t = n + 2$   
 $(5) = (3) + 2$   
 $5 = 5$  ✓

Simple Patterns

0	2
n	t
1	3
2	4
3	5

$t = \frac{1}{1}n + 2 \rightarrow t = 2, n = 0$

Sideways Tables

n	1	2	3
t	3	4	5

As Blanks

$\frac{3}{n=1}, \frac{4}{n=2}, \frac{5}{n=3}$

Term 1,2,3

$t = 3, t = 4, t = 5$   
 $n = 1, n = 2, n = 3$

Right Letter =  $\frac{\text{Change on Right letter}}{\text{Change in Left letter}}$  Left Letter  $\pm$  Value of Right Letter when Left Letter = 0

Simple Patterns (Lines)

n	t
1	2
2	5
3	8

$t = 3n - 1$

n	t
1	0
2	-1
3	-2

$t = -n + 1$

0	1
n	t
1	$\frac{5}{2}$
2	4
3	$\frac{11}{2}$
4	7
5	$\frac{17}{2}$
6	10

$t = \frac{3}{2}x + 1$

0	1
n	t
2	4
4	7
6	10

$t = \frac{3}{2}x + 1$

Complex Patterns (Curves)

n	t
1	2
2	5
3	10

$t = n^2 + 1$

n	t
1	1
2	8
3	27

$t = n^3$

n	$t_n$
1	0
2	2
3	6

$t = n^2 - n$

n	$t_n$
1	1
4	2
9	3

$t = \sqrt{n}$