



# CAMI Wiskunde: Graad 11

## GRAAD 11\_KABV Kurrikulum

### 11.4 Getalpatrone

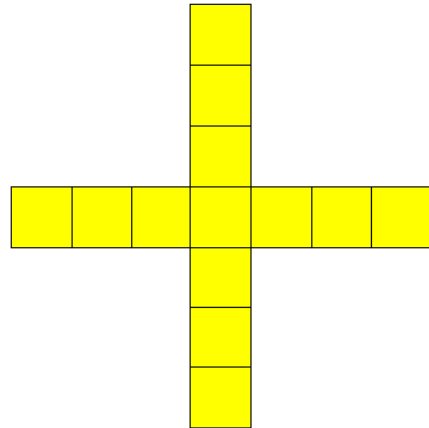
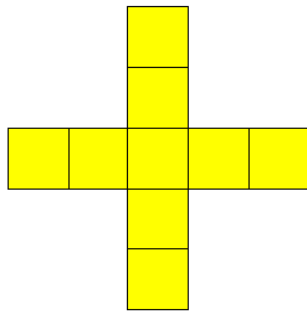
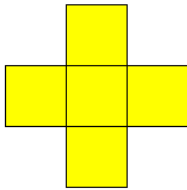
1. Voltooi die volgende getalpatrone.

(a) 49 ; 64 ; 81 ; 100 ; .... ; ....

(b) 36 ; 25 ; 16 ; .... ; ....

2. Skryf die verhouding tussen die vierkante en die figure neer in die vorm

$$T_n = an + b$$



2.1 Voltooi die tabel.

Figuur	1	2	3	4	5
Aantal vierkante					

2.2 Voltooi die berekeninge vir  $T_n$ .

3. Skryf die verhouding tussen die sirkels en die figure neer in die vorm

$$T_n = ab^2 + bn + c$$



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3.1 Voltooi die tabel.

Figuur	1	2	3	4	5
Aantal sirkels					

3.2 Voltooi die berekeninge vir  $T_n$ .

**4. Lineêre en kwadratiese getalpatrone.**

**4.1 Bepaal  $T_n$  en  $T_{99}$  vir die volgende getalpatroon:**

18 ; 23 ; 28 ; ...

**4.2 Bepaal  $T_n$  en  $T_{31}$  vir die volgende getalpatroon:**

-6 ; 2 ; 12 ; 24 ; .....



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## MEMO

### 1. Voltooi die ry. [4.1.4.3]

(a) 49 ; 64 ; 81 ; 100 ; 121 ; 144

(b) 36 ; 25 ; 16 ; 9 ; 4

### 2 Lineêre prentpatrone. [4.1.5.2]

#### 2.1

Figuur	1	2	3	4	5
Aantal vierkante	5	9	13	17	21

#### 2.2 $a = 4$

$$T_n = 4n + b$$

$$5 = 4(1) + b$$

$$b = 1$$

$$T_n = 4n + 1$$

### 3. Kwadratiese prentpatrone. [4.1.5.3]

#### 3.1

Figuur	1	2	3	4	5
Aantal sirkels	1	10	28	55	91

#### 3.2 $2a = 9$

$$a = \frac{9}{2}$$

$$3a + b = 9$$

$$3\left(\frac{9}{2}\right) + b = 9$$

$$b = -\frac{9}{2}$$

$$a + b + c = 1$$

$$\frac{9}{2} - \frac{9}{2} + c = 1$$

$$c = 1$$

$$T_n = \frac{9}{2}n^2 - \frac{9}{2}n + 1$$

### 4. Lineêre en kwadratiese patrone. [4.1.5.5]

#### 4.1 $d = 23 - 18 = 5$

$$a = 18$$

$$T_n = 5n + c$$

$$18 = 5(1) + c$$

$$c = 13$$

$$T_{99} = 5(99) + 13$$

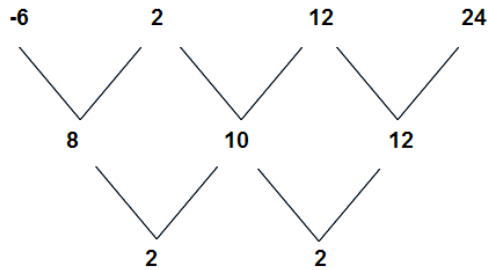
$$T_{99} = 508$$



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$$T_n = 5n + 13$$

4.2



$$\begin{aligned} 2a &= 2 \\ a &= 1 \end{aligned}$$

$$\begin{aligned} 3a + b &= 8 \\ 3(1) + b &= 8 \\ b &= 5 \end{aligned}$$

$$\begin{aligned} T_n &= n^2 + 5n + c \\ -6 &= (1)^2 + 5(1) + c \\ c &= -12 \end{aligned}$$

$$T_n = n^2 + 5n - 12$$