



CAMI Mathematics: Grade 10

GRADE 10 CAPS Curriculum

10.2 Number patterns

1.1 Write number sentences to describe the relationships between numbers.

(a)

R	2	3	4	5
S	-4	-9	-16	-25

(b)

X	2	3	4	5
Y	5	10	17	26

(c)

Y	3	4	5	6
Z	9	16	25	36

(d)

A	3	4	5	6
B	29	66	127	218

(e)

m	3	4	5	6
n	8	15	24	35

1.2 Linear patterns.

- (a) Determine T_n and T_{87} if 28 ; 43 ; 58 ; is a sequence.
- (b) Determine T_n and T_{57} if 6 ; 3 ; 0 ; is a sequence.
- (c) Determine T_n and T_{17} if 7 ; -9 ; -25 ; is a sequence.
- (d) Determine T_n and T_{21} if 5 ; -10 ; -25 ; is a sequence.
- (e) Determine T_n and T_{26} if 34 ; 48 ; 62 ; is a sequence.



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MEMO

1.1 Number sentences [4.1.3.4]]

- (a) $S = -R^2$
- (b) $y = x^2 + 1$
- (c) $z = y^2$
- (d) $b = a^3 + 2$
- (e) $n = m^2 - 1$

1.2 Linear patterns. [4.1.5.1]]

- (a) 28 ; 43 ; 58 ;

$$\begin{aligned}d &= 43 - 28 = 15 \\T_n &= a + (n - 1)d \\T_{87} &= 28 + (87 - 1)(15) \\T_{87} &= 1\,318\end{aligned}$$

- (b) 6 ; 3 ; 0 ;

$$\begin{aligned}d &= 3 - 6 = -3 \\T_n &= a + (n - 1)d \\T_{57} &= 6 + (57 - 1)(-3) \\T_{57} &= -162\end{aligned}$$

- (c) 7 ; -9 ; -25 ;

$$\begin{aligned}d &= -9 - 7 = -16 \\T_n &= a + (n - 1)d \\T_{17} &= 7 + (17 - 1)(-16) \\T_{17} &= -249\end{aligned}$$

- (d) 5 ; -10 ; -25 ;

$$\begin{aligned}d &= -10 - 5 = -15 \\T_n &= a + (n - 1)d \\T_{21} &= 5 + (21 - 1)(-15) \\T_{21} &= 295\end{aligned}$$



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(e) 34 ; 48 ; 62 ;

$$d = 48 - 34 = 14$$

$$T_n = a + (n - 1)d$$

$$T_{26} = 34 + (26 - 1)(14)$$

$$T_{26} = 384$$

