

Antwoorden - Oefenmateriaal - V5 wisA

H9: Rijen en Reeksen

1a	Rekursief: $u_n = u_{n-1} + 3$ met $u_0 = 48$ Direct: $u_n = 48 + 3n$
1b	Rekursief: $u_n = \frac{1}{2}u_{n-1}$ met $u_0 = 20$ Direct: $u_n = 20 \cdot (\frac{1}{2})^n$
2	1 jan. 2020
3a	323
3b	11,90
4	a=6
5a	72
5b	45
6a	2822
6b	689
7a	$3,5n^2 + 4,5n + 1$
7b	$n \geq 17$
8	$2n^2 + 14n + 12$
9	$1,5n^2 + 1,5n$
10a	3594,97
10b	2614,31
10c	13805,76
11a	*
11b	$n \geq 19$
12a	*
12b	$n \geq 8$
13	17, 56, 185, 611, 2018, 6665, 22013
14	9, 34, 115, 1271, 14496, 1629937, 211763953
15a	$u_n = 11,3 \text{ mjd} \cdot 1,074^n$
15b	233,58 mjd

16a	1,1 cm
16b	21,6 cm
16c	41,2 cm
17	a=4,9 b=9,8 c = 4,9
18a	268
18b	3060
19a	periode = 2π , e.s.: $y = 0$, ampl. = 1
19b	periode = $\frac{2}{3}\pi$, e.s.: $y = 2$, ampl. = 1
19c	periode = 8π , e.s.: $y = 3$, ampl. = 6
19d	periode = 20, e.s. $y = 1$, ampl. = 41
20a	$(0, 0)$, $(2\pi, 0)$, $(4\pi, 0)$, etc.
20b	$(\pi, 4)$, $(4\pi, 4)$, $(7\pi, 4)$, etc.
20c	$(1,5\pi, 4)$, $(4,5\pi, 4)$, $(7,5\pi, 4)$, etc.
20d	$(-4, 0)$, $(-3, 0)$, $(-2, 0)$, etc.
21a	Zie uitwerkingen
21b	Zie uitwerkingen
22a	$y = 8 + 4\sin(\frac{2}{15}\pi(x - 14,25))$
22b	$y = 650 + 162\sin(\frac{1}{24}\pi(x - 52))$
22c	$y = 70 + 48\sin(\frac{1}{24}\pi(x - 38))$
23a	$t_{\max} = 8,85$ $N_{\max} = 37,1$
23b	$t_{\min} = 1,35$ $N_{\min} = 24,5$
23c	35,65
23d	241 min.
24	$y = 1 + 3\sin(\frac{1}{4}\pi(x - 6,5))$
25	$u_n = \frac{1}{8}\pi + n \cdot \frac{1}{2}\pi$ $u_0 = 10\frac{1}{8}\pi$

H10: Allerlei functies

1a	$x = -3 \vee x = 3$
1b	$x = 0 \vee x = 1$
1c	$x = 8,5$
1d	$x = 29$
1e	$x = 11$
1f	$x = -1 \vee x = 4$
1g	$x = 5$
1h	$x = \frac{3}{4}$
1i	$x = \frac{3}{8}$
1j	$x = 2$
2a	$D_f = \{\leftarrow, \rightarrow\}$ $B_f = \{\leftarrow, 0\}$

5a	$y = 5(x - 8)^6 - 3$
5b	$y = -(x - 6)^3 + 5$
5c	$y = 3\sqrt{2(x - 4)} - 6$
5d	$y = \frac{1}{x+2} + 4$
6a	H.A. $y = 0$
6b	H.A. $y = 0$
6c	H.A. $y = 4$
6d	H.A. $y = 0$ en V.A. $x = 0$
6e	H.A. $y = 120$ en V.A. $x = -70$
6f	H.A. $y = 2$ en V.A. $x = \frac{4}{5}$
7a	${}^2\log(42)$

2b	$D_g = \langle \leftarrow, \rightarrow \rangle \mid B_g = \langle \leftarrow, \rightarrow \rangle$
2c	$D_h = [-1, \rightarrow) \mid B_h = [0, \rightarrow)$
2d	$D_i = \langle \leftarrow, 2] \mid B_i = \langle \leftarrow, -2]$
2e	$D_j = \langle \leftarrow, 6 \rangle \cup \langle 6, \rightarrow \rangle \mid B_j = \langle \leftarrow, 0 \rangle \cup \langle 0, \rightarrow \rangle$
2f	$D_k = \langle \leftarrow, -3 \rangle \cup \langle -3, \rightarrow \rangle \mid B_k = \langle \leftarrow, 4 \rangle \cup \langle 4, \rightarrow \rangle$
3a	$-4 \leq x \leq 4$
3b	$x \geq 15$
3c	$x < -1 \vee -1 < x < -\frac{1}{2}$
3d	$0 < x < 81$
4a	max. (5, 8)
4b	min. (0, 7)
4c	max. (-3, 2)
4d	pvs. (1, 0)
4e	min. (-2, -4)

7b	${}^3\log\left(\frac{9}{a^4}\right)$
7c	${}^3\log(2)$
8a	$y = 3x^2$
8b	$y = 9x^{10}$
8c	$y = 25 \cdot 8^x$
8d	$y = 275 \cdot \left(\frac{1}{25}\right)^x$
9a	$\log(N) = \log(280) + \log(1,7) t$
9b	$\log(N) = \log(20) - 2\log(0,4) + 3\log(0,4) t$
10a	$y = 20 \cdot 0,251^x$
10b	$y = 6 \cdot 0,397^x$

H11: Kansverdelingen

1a	$\frac{1291}{1296}$										
1b	$\frac{427}{432}$										
2a	0,370										
2b	0,048										
2c	0,173										
3a	0,328										
3b	0,738										
3c	0,336										
4	22 t/m 28										
5a	0,197										
5b	0,017										
5c	0,046										
6a	<table><tr><td>x</td><td>1</td><td>2</td><td>3</td><td>4</td></tr><tr><td>$P(X = x)$</td><td>$\frac{4}{7}$</td><td>$\frac{2}{7}$</td><td>$\frac{4}{35}$</td><td>$\frac{1}{35}$</td></tr></table>	x	1	2	3	4	$P(X = x)$	$\frac{4}{7}$	$\frac{2}{7}$	$\frac{4}{35}$	$\frac{1}{35}$
x	1	2	3	4							
$P(X = x)$	$\frac{4}{7}$	$\frac{2}{7}$	$\frac{4}{35}$	$\frac{1}{35}$							
6b	$E(X) = 1,6 \mid \sigma_x = 0,8$										

7a	0,246
7b	0,081
8a	0,576
8b	0,998
9a	0,085
9b	0,002
10	140
11a	68%
11b	95%
12a	0,0002
12b	0,040
12c	0,002
12d	0,012