

## Lösungen zu den Beispielen E1 - E6

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Beispiel E1:

$A_V$ [kN]	$A_H$ [kN]	$M_a$ [kN m]	$B_V$ [kN]	$B_H$ [kN]
5,0	10,0	120,0	15,0	-30,0

$S_1$ [kN]	$S_2$ [kN]	$S_3$ [kN]	$S_4$ [kN]
7,071	-35,0	-21,213	20,0

Bereich $0 < x < 3$			Bereich $3 < x < 6$		
$N(x)$	$V(x)$	$M(x)$	$N(x)$	$V(x)$	$M(x)$
-5	-10	$120 - 10x$	-5	-30	$180 - 30x$

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Beispiel E2:

$A_V$ [kN]	$A_H$ [kN]	$M_a$ [kN m]	$B_V$ [kN]	$B_H$ [kN]
42,071	7,929	-128,284	22,071	22,071

$S_1$ [kN]	$S_2$ [kN]	$S_3$ [kN]	$S_4$ [kN]	$S_5$ [kN]
-14,142	-14,142	-11,213	30,0	0

$N(x)$	$V(x)$	$M(x)$
-7,929	$42,071 - 5x$	$-2,5x^2 + 42,071x - 128,284$

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Beispiel E3:

$A_V$ [kN]	$A_H$ [kN]	$D_V$ [kN]	$D_H$ [kN]
4,14	2,97	3,03	5,86

$S_1$ [kN]	$S_2$ [kN]	$S_3$ [kN]	$S_4$ [kN]	$S_5$ [kN]	$S_6$ [kN]	$S_7$ [kN]
2,00	-2,83	-2,00	2,83	2,00	-6,29	-8,29

Bereich $0 < x < 3$			Bereich $3 < x < 5$		
$N(x)$	$V(x)$	$M(x)$	$N(x)$	$V(x)$	$M(x)$
-2,97	-0,14	$8,69 - 0,14x$	-2,97	-4,14	$20,69 - 4,14x$

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Beispiel E4:

$A_V$ [kN]	$A_H$ [kN]	$B_V$ [kN]	$B_H$ [kN]	$M_b$ [kN m]
15,0	2,50	50,0	2,50	-240,0

$S_1$ [kN]	$S_2$ [kN]	$S_3$ [kN]	$S_4$ [kN]
3,536	-32,50	0	3,536

$N(x)$	$V(x)$	$M(x)$
-2,5	$15 - 0,56x^2$	$15x - 0,185x^3$

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Beispiel E5:

$A_V$ [kN]	$A_H$ [kN]	$M_a$ [kN m]	$B$ [kN]	$C$ [kN]
-3,0	-2,33	18,0	-1,67	18,0

$S_1$ [kN]	$S_2$ [kN]	$S_4$ [kN]	$S_5$ [kN]	$S_6$ [kN]
-1,67	2,36	0,67	-3,30	4,67

Bereich $0 < x < 6$			Bereich $6 < x < 9$			Bereich $9 < x < 12$		
$N(x)$	$V(x)$	$M(x)$	$N(x)$	$V(x)$	$M(x)$	$N(x)$	$V(x)$	$M(x)$
2,33	-3	$18 - 3x$	2,33	$9 - 2x$	$-x^2 + 9x - 18$	2,33	$27 - 2x$	$-x^2 + 27x - 180$

Beispiel E6:

$A_V$ [kN]	$A_H$ [kN]	$B_V$ [kN]	$B_H$ [kN]	$M_b$ [kN m]
65,0	5,0	0,0	25,0	62,5

$S_2$ [kN]	$S_4$ [kN]	$S_5$ [kN]
-40,0	50,0	-35,36

$N(x)$	$V(x)$	$M(x)$
-25,0	$25 - 5x$	$25x - 2,5x^2$