

Anwendungsaufgabe 5 - Lösung

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#1:  b(t) := - 150·t2 + 3600·t - 19200
#2:  B(t) := ∫ b(t) dt·und·B(10) = 0
#3:  - 50·t3 + 1800·t2 - 19200·t + 62000
#4:  B(11)
#5:  2050
#6:  b(11)
#7:  2250
#8:  SOLVE(B(t) = 4400, t)
#9:  t = 12 - 4·√3 ∨ t = 4·√3 + 12 ∨ t = 12
#10: SOLVE(b'(t) = 0, t)
#11:  t = 12
#12: b''(12)
#13:  -300
#14: b(12)
#15:  2400
#16:   $\frac{b(12)}{60}$ 
#17:  20
#18: SOLVE(b(t) = 0, t)
#19:  t = 16 ∨ t = 8
#20: b'(16)
#21:  -1200
#22: B(16)
#23:  10800
#24: SOLVE(B(t) > 9500, t)
#25:  t < 4.186294958 ∨ 14.42041041 < t < 17.39329462
#26: B(19.5)
#27:  1306.25
#28: b(19.5)
#29:  -6037.5
#30: SOLVE(B(t) = 0, t)

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#31:  $t = 6.291796067 \vee t = 19.70820393 \vee t = 10$

#32: 
$$\frac{B(16) \cdot 2000}{b(10)}$$

#33:  $12000$