3.11 $t = 1$ s, $x = -1,088$ m,
$y = -0,8391$ m, $v_x = -16,78$ m/s,
$v_y = 5,44$ m/s, $v = 17,64$ m/s,
$a_x = 108,8$ m/s^2, $a_y = 83,91$ m/s^2,
$a_n = 113,37$ m/s^2, $a = 137,4$ m/s^2

3.12 $\dfrac{x^2}{4} + \dfrac{(4-y)^2}{9} = 1$, $z = t$

(eliptična zavojnica u prostoru),
$x = 1,73$ cm, $y = 2,5$ cm, $z = 1$ cm,
$v = 3,082$ cm/s, $a_n = 2,381$ cm/s^2,
$a_t = 0,807$ cm/s^2, $a = 2,514$ m/s^2,
$\rho = 3,99$ cm

3.13 $\varphi = 0,25$ rad, $r = 1,5$ m, $v = 5$ m/s,
$a_r = -16,67$ m/s^2, $a_\varphi = 8$ m/s^2,
$a = 18,49$ m/s^2

3.14 $v_{(x=15)} = 5,943$ m/s ($\alpha = 13,5°$),
$\rho = 67,98$ m,
$a_n = 0,5195$ m/s^2 ($\beta = 103,5°$)

3.15 $a_n = 322$ mm/s^2 ($\alpha = 63,43°$), $a_t = 0$,
$\rho = 279,5$ mm

3.16 $\rho = 87,62$ km, $a = 0,9211$ m/s^2
($\varphi = 105,67°$), $\alpha = 75,96°$

3.17 $v_y = -1$ m/s, $a_x = 0$, $a_y = 0,5$ m/s^2,
$\rho = 8,762$ m, $v = 0,25\sqrt{17}$ m/s

3.18 $x = 1$ m, $y = 2,5$ m, $v_x = 2$ m/s,
$v_y = 2$ m/s,
$v = 1,414$ m/s ($45°$), $a_x = 0$,
$a_y = 4$ m/s^2 ($90°$)

3.19 $r = 1,0557$ m, $\varphi = 0,2361$ rad,
$v_r = 0,4721$ m/s, $v_\varphi = 1,056$ m/s,
$v = 1,1564$ m/s
$a_r = 0,9443$ m/s^2, $a_\varphi = 0,9443$ m/s^2,
$a = 1,3354$ m/s^2

3.20 $v = 0,621$ m/s, $a = 0,655$ m/s^2,
$r = 0,4764$ m

3.21 $v_r = 8,66$ m/s, $a_r = 63,92$ m/s^2,
$\rho = 5$ m

3.22 $r = 0,5$ m, $\varphi = -0,5$ rad, $\rho = 1,355$ m,
$a_r = -31$ m/s^2, $a_n = 14,76$ m/s^2,
$a_t = 27,28$ m/s^2

3.23 $v_r = 1$ m/s, $v_\varphi = 4$ m/s, $a_\varphi = -2$ m/s^2

3.24 $v = 6,403$ m/s, $a = 11,7$ m/s^2

3.25 $v_r = 1$ m/s, $v_\varphi = 0,75$ m/s,
$v = 1,25$ m/s, $\rho = 3,049$ m,
$a_r = -0,6875$ m/s^2, $a_\varphi = 0,125$ m/s^2,
$a = 0,6988$ m/s^2

3.26 $\rho = 6191$ m, $\varphi = 1,065$ rad,
$z = 1451$ m, $v_\rho = 99,23$ m/s,
$v_\varphi = 54,97$ m/s, $v_z = 30,4$ m/s,
$v_A = 117,4$ m/s

3.27 $a = 27,46$ m/s^2, ($a = 2,8g$),
$\gamma = 74,11° + 180°$ (mjereno od osi z)

3.28 $v = \dfrac{c}{\sin\varphi}$, $a = \dfrac{c^2}{r}\dfrac{1}{\sin^3\varphi}$

3.29 $\alpha = 90° - \beta$ iz $\dfrac{\mathrm{d}}{\mathrm{d}t}\big[f(v,t) = 0\big] = 0$

3.30 $v_r = \dfrac{bv\sin\beta}{\sqrt{4b^2\sin^2\dfrac{\beta}{2} + h^2}}$,

$v_\varphi = v\sin\dfrac{\beta}{2}$,

$v_\vartheta = \dfrac{-hv\cos\dfrac{\beta}{2}}{\sqrt{4b^2\sin^2\dfrac{\beta}{2} + h^2}}$