3.8 čestice treba izbaciti istodobno,
$v_{min} = 12{,}86$ m/s, $t = 2{,}62$ s

3.9 $x_B = 30$ m, $y_B = 32{,}3415$ m,
$v_x = 15$ m/s, $v_y = 6{,}36$ m/s,
$v = 16{,}293$ m/s, $\rho = 29{,}39$ m
$a_t = -3{,}829$ m/s^2, $a_n = 9{,}031$ m/s^2,

3.10 $v_x = 2$ m/s, $v_y = 0$, $a_x = 0$,
$a_y = -2$ m/s^2, $\rho = 2$ m, (kružnica)

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,
$a_y = 4$ m/s^2, $a_x = 0$

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, $v = 10$ m/s, $a = 87{,}67$ m/s^2

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 $v_B = 2{,}96$ m/s, $a_B = 0{,}672$ m/s^2

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 $v_r = bv\sin\dfrac{\beta}{2}\left(4b^2\sin^2\dfrac{\beta}{2} + h^2\right)^{-\frac{1}{2}}$,

$v_\varphi = v\sin(\beta/2)$,

$v_\vartheta = -hv\cos\dfrac{\beta}{2}\left(4b^2\sin^2\dfrac{\beta}{2} + h^2\right)^{-\frac{1}{2}}$