Answers.

① $(y + x^2 - cx)(y - cx e^{\bar{k}}) = 0$

② $(y - 3x - c)(y - 4x - c) = 0.$

③ $(y - c e^x)(y + x - 1 - c e^x) = 0.$

④ $(y - c \sec^2 \frac{u}{2})(y - c \cos^2 \frac{u}{2}) = 0.$

⑤ $\{y - x \sinh(c + x)\}\{y - x \sinh(c - x)\} = 0.$

⑥ $2xc - y^2 + c^2 = 0.$

⑦ $\log y = cx + c^2.$

⑧ The given eq^n & $y = 2p^2 + 3p^4 + c$ give the sol^n in parametric form.

⑨ $(x - a)^2 + (y - c)^2 = 1$

⑩ $x^2 + y^2 - 2cx = 0.$

⑪ $x = c(1 + p^2)/p^2$ & $y = 2c/p$ give the sol^n in parametric form.

⑫ $x = \frac{a}{2}\left[\log(p-1) - \tan^{-1}p - \frac{1}{2}\log(1 + p^2) + \log c\right]$

$y = \frac{a}{2}\left[\log\{c(p-1)/(1+p^2)^{y_2}\} + \tan^{-1}p\right]$

(13) $x = \left(\frac{8}{5}\right)p + cp^{-3/2}$

$y = 3p\left\{\left(-\frac{8}{5}\right)p + cp^{-3/2}\right\} + 4p^2 = 3cp^{-3/2} - \frac{4}{5}p^2$

(14) The given eqn & $x = \lambda mp + c$ gives

this soln.

(15) $c^2(x^2 - a^2) - 2cxy + y^2 - l^2 = 0$

(16) put $u = x^n$, $v = y^n$ in this problem

Ans. $y^n = cx^n - (bc)/(1+ac)$

(17) $y^2 = xc - (ac^2/4)$

(18) g. sol^n $3y + 2c = \pm 2x(xc)^{1/2}$

Sing sol^n $x^3 - 6y = 0$

(19) g. sol^n $c(y+c)^2 = x^3$

Sing. sol^n $x = 0$ & $4y^3 + 27x^3 = 0$

(20) g. sol^n $c^2 - 2c(x-2a) + x^2 - 4ay = 0$

Sing sol^n $y - x + a = 0$

(21) g. sol^n $y = cx + (c^2 + a^2c^2)^{1/2}$

Sing sol^n $x^2/a^2 + y^2/c^2 = 1$.

(22) g. sol^n $y = cx \pm (m^2 + c^2)^{1/2}$

Sing. sol^n $y^2 + m^2 x^2 = m^2$.