

`In[]:= Solve[{c * u * (1 - (B * d) - c) - (n * c * p) - (M * c * g) - (l * c) == 0,
d * y * (1 - (F * c) - d) - (n * d * p) - (l * d) == 0,
(M * t * c) - (l * M) == 0, (n * r * c) + (n * r * d) - (l * n) == 0}, {c, d, M, n}] // Simplify`

`Out[]:=` $\left\{ \left\{ c \rightarrow 0, d \rightarrow \frac{l}{r}, M \rightarrow 0, n \rightarrow \frac{r y - l (r + y)}{p r} \right\}, \right.$
 $\left\{ c \rightarrow 0, d \rightarrow 1 - \frac{l}{y}, M \rightarrow 0, n \rightarrow 0 \right\}, \left\{ c \rightarrow \frac{l}{t}, d \rightarrow 0, M \rightarrow \frac{t u - l (t + u)}{g t}, n \rightarrow 0 \right\},$
 $\left\{ c \rightarrow \frac{l}{t}, d \rightarrow l \left(\frac{1}{r} - \frac{1}{t} \right), M \rightarrow \frac{r t (u - y) + l ((-1 + B) r u + (-1 + F) r y + t (-B u + y))}{g r t}, \right.$
 $\left. n \rightarrow \frac{r t y - l (t y + r (t + (-1 + F) y))}{p r t} \right\},$
 $\left\{ c \rightarrow \frac{l}{t}, d \rightarrow 1 - \frac{F l}{t} - \frac{l}{y}, M \rightarrow \frac{t u y - l (t + u) y + B u (-t y + l (t + F y))}{g t y}, n \rightarrow 0 \right\},$
 $\left\{ c \rightarrow \frac{B l u - l y + r (-u + y)}{r ((-1 + B) u + (-1 + F) y)}, d \rightarrow \frac{-l u + r u + F l y - r y}{r ((-1 + B) u + (-1 + F) y)}, \right.$
 $\left. M \rightarrow 0, n \rightarrow \frac{(1 - B F) l u y + (-2 + B + F) r u y + l r (u - B u + y - F y)}{p r ((-1 + B) u + (-1 + F) y)} \right\},$
 $\left\{ c \rightarrow \frac{l}{r}, d \rightarrow 0, M \rightarrow 0, n \rightarrow \frac{r u - l (r + u)}{p r} \right\}, \left\{ c \rightarrow 1 - \frac{l}{u}, d \rightarrow 0, M \rightarrow 0, n \rightarrow 0 \right\},$
 $\left\{ c \rightarrow \frac{B l u - l y + u y - B u y}{u y - B F u y}, d \rightarrow \frac{(-1 + F) u y + l (u - F y)}{(-1 + B F) u y}, M \rightarrow 0, n \rightarrow 0 \right\},$
 $\{ c \rightarrow 0, d \rightarrow 0, M \rightarrow 0, n \rightarrow 0 \} \}$

`In[]:= Solve[{(c * u * ((a * d) / ((a * d) + k)) * (1 - c)) - (n * c * p) - (M * c * g) - (l * c) == 0,
(d * y * ((x * c) / ((x * c) + q)) * (1 - c)) - (n * d * p) - (l * d) == 0,
(M * t * c) - (l * M) == 0, (n * r * c) + (n * r * d) - (l * n) == 0}, {c, d, M, n}] // Simplify`

`Out[]:=` $\left\{ \left\{ c \rightarrow 0, d \rightarrow \frac{l}{r}, M \rightarrow 0, n \rightarrow -\frac{l}{p} \right\}, \left\{ c \rightarrow 1, d \rightarrow -1 + \frac{l}{r}, M \rightarrow 0, n \rightarrow -\frac{l}{p} \right\}, \right.$
 $\left\{ c \rightarrow \frac{l}{t}, d \rightarrow l \left(\frac{1}{r} - \frac{1}{t} \right), M \rightarrow \frac{l (-l + t) (-a (r - t) (q t u + l x (u - y)) - k r t x y)}{g t (k r t + a l (-r + t)) (q t + l x)}, \right.$
 $\left. n \rightarrow -\frac{l (q t^2 - t x y + l x (t + y))}{p t (q t + l x)} \right\}, \left\{ c \rightarrow -\frac{l x - x y + \sqrt{-4 l q x y + (l x - x y)^2}}{2 x y}, \right.$
 $d \rightarrow \frac{k (l x (u - 2 y) + u x y - u \sqrt{x (l^2 x - 2 l (2 q + x) y + x y^2)})}{2 a (q u^2 - (l - u) x (u - y))}, M \rightarrow 0, n \rightarrow 0 \},$
 $\left\{ c \rightarrow \frac{-l x + x y + \sqrt{-4 l q x y + (l x - x y)^2}}{2 x y}, \right.$

$$\begin{aligned}
& d \rightarrow \frac{k \left(l x (u - 2 y) + u \left(x y + \sqrt{x (l^2 x - 2 l (2 q + x) y + x y^2)} \right) \right)}{2 a (q u^2 - (l - u) x (u - y))}, M \rightarrow 0, n \rightarrow 0, \{c \rightarrow \\
& \frac{-a q r u + a l u x - a l x y + k r x y + \sqrt{4 a^2 l q r u x (u - y) + (a q r u + k r x y + a l x (-u + y))^2}}{2 a r x (u - y)}, \\
& d \rightarrow \\
& \frac{a q r u + a l u x - a l x y + k r x y - \sqrt{4 a^2 l q r u x (u - y) + (a q r u + k r x y + a l x (-u + y))^2}}{2 a r x (u - y)}, \\
& M \rightarrow 0, n \rightarrow \left(a^2 (q^2 r^2 u^2 + l x^2 (u - y) (-l (2 r + y) + r (u + y)) + \right. \\
& \quad q r x (r u (u - y) + l (-2 r u + u^2 + 2 r y)) + \\
& \quad k r x y \left(k r x y - \sqrt{a^2 (q r u + l x (u - y))^2 + k^2 r^2 x^2 y^2 + 2 a k r x y (q r u + l x (-u + y))} \right) - \\
& \quad a \left(k r x (l x (2 r (u - y) + (u - 2 y) y) + r y (-2 q u + x (-u + y))) + (q r u + r x (u - y) + \right. \\
& \quad \quad l x y) \sqrt{a^2 (q r u + l x (u - y))^2 + k^2 r^2 x^2 y^2 + 2 a k r x y (q r u + l x (-u + y))} \left. \right) \Big) / \\
& \quad (2 a p r x (a q r + a l x + k r x) (u - y)) \Big), \{c \rightarrow \\
& \frac{a q r u - a l u x + a l x y + k r x y + \sqrt{4 a^2 l q r u x (u - y) + (a q r u + k r x y + a l x (-u + y))^2}}{2 a r x (-u + y)}, \\
& d \rightarrow \\
& \frac{a q r u + a l u x - a l x y + k r x y + \sqrt{4 a^2 l q r u x (u - y) + (a q r u + k r x y + a l x (-u + y))^2}}{2 a r x (u - y)}, \\
& M \rightarrow 0, n \rightarrow \left(a^2 (q^2 r^2 u^2 + l x^2 (u - y) (-l (2 r + y) + r (u + y)) + \right. \\
& \quad q r x (r u (u - y) + l (-2 r u + u^2 + 2 r y)) + \\
& \quad k r x y \left(k r x y + \sqrt{a^2 (q r u + l x (u - y))^2 + k^2 r^2 x^2 y^2 + 2 a k r x y (q r u + l x (-u + y))} \right) + \\
& \quad a \left(k r x (r (2 q u + x (u - y)) y + l x (-2 r u + 2 r y - u y + 2 y^2)) + (q r u + r x (u - y) + \right. \\
& \quad \quad l x y) \sqrt{a^2 (q r u + l x (u - y))^2 + k^2 r^2 x^2 y^2 + 2 a k r x y (q r u + l x (-u + y))} \left. \right) \Big) / \\
& \quad (2 a p r x (a q r + a l x + k r x) (u - y)) \Big), \left\{ c \rightarrow \frac{l}{r}, d \rightarrow 0, M \rightarrow 0, n \rightarrow \right. \\
& \quad \left. -\frac{l}{p} \right\}, \left\{ c \rightarrow \frac{l}{t}, d \rightarrow \right. \\
& \quad 0, M \rightarrow \\
& \quad \left. -\frac{l}{g}, n \rightarrow \right. \\
& \quad 0 \Big\}, \{c \rightarrow \\
& \quad 0, d \rightarrow \\
& \quad 0, M \rightarrow \\
& \quad 0, n \rightarrow \\
& \quad 0 \Big\} \Big\}
\end{aligned}$$