

$$10.) \quad k = 6\left(x - \frac{1}{y}\right) = 3\left(y - \frac{1}{z}\right) = 2\left(z - \frac{1}{x}\right) = xyz - \frac{1}{xyz}$$

$$2 \cdot 6\left(\frac{xy-1}{y}\right) = 3\left(\frac{yz-1}{z}\right)$$

$$2xyz - 2z = y^2z - y$$

$$2xyz = z(y^2 + 2) - y$$

$$\frac{3yz - 3}{z} = \frac{2xz - 2}{x}$$

$$3xyz = x(2z^2 + 3) - 2z$$

$$\frac{3xy - 3}{y} = \frac{xz - 1}{x}$$

$$xyz = \textcircled{0} \textcircled{0} \cancel{3x(xy-1)} \textcircled{+y} \cdot y(3x^2+1) - 3 \textcircled{0} x$$