

put $x = 1.051$ and $y = 1.344$ into eqⁿ
③ we get

$$z = \frac{1}{29} [71 - 3(1.051) - 8(1.344)] = \frac{962}{29} = 1.969$$

4th approximation

put $y = 1.344$ and $z = 1.969$ into eqⁿ ①

$$x = \frac{1}{83} [95 - 11(1.344) + 4(1.969)]$$

$$\boxed{x = 1.051}$$

put $x = 1.051$ and $z = 1.969$ into
eqⁿ ② we get

$$y = \frac{1}{52} [104 - 7(1.051) - 13(1.969)]$$

$$\boxed{y = 1.344}$$

put $x = 1.051$ $y = 1.344$ into eqⁿ ③
we get

$$z = \frac{1}{29} [71 - 3(1.051) - 8(1.344)]$$

$$\boxed{z = 1.969}$$

Thus, the required approximate solution upto 3 decimal
places $x = 1.051$, $y = 1.344$ and $z = 1.969$ Ans