

Question 112

Given $100\bar{a}_{30} = 1200$ so $\bar{a}_{30} = 12$

$100\bar{a}_{40} = 1000$ so $\bar{a}_{40} = 10$

Want $100\bar{a}_{\overline{30:40}} = 100\bar{a}_{30} + 100\bar{a}_{40} - 100\bar{a}_{30:40}$

$1180 = 70\bar{a}_{30} + 50\bar{a}_{40} + (100 - 70 - 50)\bar{a}_{30:40}$

$1180 = (70)(12) + (50)(10) - 20\bar{a}_{30:40}$

$160 = 20\bar{a}_{30:40}$ $8 = \bar{a}_{30:40}$

$100\bar{a}_{\overline{30:40}} = 1200 + 1000 - (100)(8) = 1400$ A