

### EXERCISES 21-1.1

Q1. (a)  $205 \times 4.092 = 838.86$   
i.e., 839 French francs

(b)  $138 \times 4.092 = 564.696$   
i.e., 565 French francs.

(c)-(f) see answers in book.

Q2. (a)  $366 \times 3.473 = 1271.118$   
i.e., 1271 rand

(b)  $165 \times 3.473 = 573.045$   
i.e., 573 rand

(c)-(f) see answers in book

Q3. (a)  $75 \times 23.261 = 1744.575$   
i.e., 1745 rupees

(b)  $17 \times 23.261 = 395.437$   
i.e., 395 rupees.

(c)-(f) see answers in book.

Q4. (a)  $\frac{54829}{1740} = 31.2235$   
i.e., \$US 31.22

(b)  $\frac{49550}{1740} = 28.4770$   
i.e., \$US 28.48

(c)-(f) see answers in book.

Q5. (a) Using ratios we have

$$\frac{x}{3.5138} = \frac{77}{3.0274}$$

$$\Leftrightarrow x = 77 \times \frac{3.5138}{3.0274}$$
$$= 89.37$$

i.e., 89 French francs.

(b)  $\frac{x}{3.5138} = \frac{18}{3.0274}$

$$\Leftrightarrow x = 18 \times \frac{3.5138}{3.0274}$$
$$= 20.89$$

i.e., 21 French francs.

(c)-(f) see answers in book.

### EXERCISES 21.1.2

Q1. (a) 'We buy: 145.7' means they will give you \$1 US for every 145.7 yen you give them  
'We sell: 143.1' means they will give you 143.1 yen for every \$1 US you give them.

i. \$ US 1000 =  $1000 \times 143.1$   
= 143100

i.e., 143100 yen.

ii.  $\frac{143100}{145.7} = 982.155$

i.e., \$ 982.16 (US)

iii. Commission =  $1000 - 982.16$   
= 17.84

i.e., \$ US 17.84

(b) i.  $1281 \times 143.1 = 183311.1$

i.e., 183311 yen.

ii.  $\frac{183311.1}{145.7} = 1258.14$

i.e., \$ US 1258.14

iii. Com =  $1281 - 1258.14 = 22.859$

i.e., \$ US 22.86

(c) i.  $1513 \times 143.1 = 216510.3$

i.e., 216510 Yen.

ii.  $\frac{216510.3}{145.7} = 1486$  i.e., \$ US 1486

iii. Com =  $1513 - 1486 = 27$  i.e., \$ US 27.

(d) i.  $1356 \times 143.1 = 194043.6$

i.e., 194044 yen

ii.  $\frac{194043.6}{145.7} = 1331.80$

i.e., \$ US 1331.80

iii. Com =  $1356 - 1331.80$   
= 24.2.

i.e., \$ US 24.2.

(e) i.  $1283 \times 143.1 = 183597.3$

i.e., 183597 yen

ii.  $\frac{183597.3}{145.7} = 1260.105$

i.e., \$ US 1260.11

iii. Com =  $1283 - 1260.11 = 22.89$

i.e., \$ US 22.89

(f) i.  $1595 \times 143.1 = 228244.5$

i.e., 228245 Yen

ii.  $\frac{228244.5}{145.7} = 1566.54$

i.e., 1566.54 Yen.

iii. Com =  $1595 - 1566.54$   
= 28.46

i.e., \$ US 28.46

Q2. 'We buy: 1033' means you give them 1033 lire for every 1 German mark they give you.

'We sell: 1019' means they give you 1019 lire for every 1 German mark you give them.

Q2. (Contd.)

(a) i.  $1000 \times 1019 = 1019000$  (lire)

ii.  $\frac{1019000}{1033} = 986.46$  (G.marks)  
(= 986)

iii. Com =  $1000 - 986.46$   
 $= 13.54$  (G.marks)  
(= 14)

(b) i.  $1608 \times 1019 = 1638552$  (lire)

ii.  $\frac{1638552}{1033} = 1586.21$   
 $= 1586$  (G.marks)

iii. Com =  $1608 - 1586.21$   
 $= 21.79$   
 $= 22$  (G.marks)

(c) i.  $1359 \times 1019 = 1384821$  (lire)

ii.  $\frac{1384821}{1033} = 1340.58$   
 $= 1341$  (G.marks)

iii. Com =  $1359 - 1341$   
 $= 18$  (G.marks)

(d) i.  $1468 \times 1019 = 1495892$  (lire)

ii.  $\frac{1495892}{1033} = 1448.10$   
 $= 1448$  (G.marks)

iii. Com =  $1468 - 1448$   
 $= 20$  (G.marks)

(e) i.  $1606 \times 1019 = 1636514$  (lire)

ii.  $\frac{1636514}{1033} = 1584.23$   
 $= 1584$  (G.marks)

iii. Com =  $1606 - 1584$   
 $= 22$  (G.marks)

(f) i.  $1217 \times 1019 = 1240123$  (lire)

ii.  $\frac{1240123}{1033} = 1200.51$   
 $= 1201$  (G.marks)

iii. Com =  $1217 - 1201$   
 $= 16$  (G.marks).

Q4. (a) i.  $6627 \times 6.09 = 40358.43$   
i.e., 40358 rand.

ii.  $\frac{40358.43}{6.26} = 6447.03$   
\$ US 6447

iii. Com =  $6627 - 6447$   
 $= \$ US 180.$

(b) i.  $7491 \times 6.09 = 45620.19$   
 $= 45620$  rand

ii.  $\frac{45620.19}{6.26} = 7287.57$   
i.e., \$ US 7288

iii. Com =  $7491 - 7288 = 203$   
i.e., \$ US 203.

(c)-(f) are done in exactly the same way. See answers in text book.