

# ACTIVITIES 11.1 – 11.5

## Notes and Solutions

*Notes and solutions given only where appropriate.*

- 11.1** 1. (a) 16 \$ (b) 13.65 DM (c) 40.6 A\$ (d) 6780 L  
 2. (a) £2.61 (b) £17.22 (c) £37.24 (d) £62.50 (e) £20.52  
 3. (a) 313.6 \$ (b) 537.81 DM (c) 1817 F Fr  
 4. 2675.4 DM  
 5. (a) £894.88 (b) £105.12  
 6. 1.52

- 11.2** 3. *Minicabs* is cheaper for distances over  $2\frac{1}{2}$  miles.  
 4. *Minicabs* is cheaper for distances over 3 miles.  
 5. (a) £1.25 (b) £2.00 (c) £3.50

*Extension:* Just under 3 miles

- 11.3** 1. (a) £21 (b) £14 (c) £87.50  
 2. (a) £17.50 (b) £70  
 3. (a) 0.1489 (b) 0.1489x  
 4. (b) 6.7143  
 5. (a) 6.2632 (b) (i) £19 (ii) £7.98 (iii) £12.77

- 11.4a** 2. £31 384 000  
 3. £376 608 000 ; £7 928 589 474  
 4. 4 200 000  
 5. 1 in 1888 chance or 0.0005297  
 6. about 1888

*Extension;* About 5.3 times

- 11.4b** 1. £2 500 000, £3 750 000, £18 750 000  
 2. £300 000 ; 3, 6, 12, 30, 60  
 3. 1500 £1000 prizes and 4500 £500 prizes

*Extension:*  $100x + 50y = 18\,750\,000$ ,  $x + y = 343\,888$

$$x = 31\,112, \quad y = 312\,776$$

- 11.5** 1. (a) 9.38% (b) 12.68%  
 2. (a) 21.94% (b) 20.88% (c) 20.31%  
 3. 9.53% per annum  
 4. First two accounts are slightly better (APR 9.25% compared to 9.23%).