

**Exercise 1.2**

answers on p. 417

No calculators may be used for questions 1 to 8.

Evaluate the following expressions, showing the order of calculation.

1. (a)  $4 \times 6 \div 8 + 32 - 12$  (b)  $42 \div 7 \times 3 - 11 + 9$   
 (c)  $16 - 7 + 9 \times 5 \div 45$  (d)  $23 + 80 - 105 \div 7 \times 3$   
 (e)  $54 - 32 \times 8 \div 16 + 73$  (f)  $76 + 24 \div 12 \times 7 - 26$
2. (a)  $72 \div (5 + 4) \times 6$  (b)  $15 \times (34 - 29) \div 25$   
 (c)  $56 \div 8 \times (24 + 11)$  (d)  $25 \times 9 \div (31 - 16)$
3. (a)  $36 \div (28 - 2 \times 8) \div 3$  (b)  $13 \times (5 - 45 \div 9) + 18$   
 (c)  $6 + (7 \times 7 - 7) \div 6$  (d)  $27 - (405 \div 45 \div 9) \times 4$
4. (a)  $(323 - 213) \times (161 - 153)$  (b)  $(126 + 30) \div (96 - 83)$   
 (c)  $(264 \div 12 - 3) \times (330 \div 15)$  (d)  $(13 + 26 \times 5) \div (15 \times 6 - 79)$
5. (a)  $4 \times [(12 + 8) \times 2 + 3] + 4$   
 (b)  $15 + [568 - (283 - 265) \times 12] \times 3$   
 (c)  $300 - [(345 - 264) \times 3] \div 9$   
 (d)  $264 \div [(127 - 124) \times 4] - 22$
6. (a)  $\{[(174 - 120) \times 9 + 14] \times 5 - 24\} \times 7$   
 (b)  $\{[(211 - 102) \times 7 + 26] \times 3 - 312\} \div 15$   
 (c)  $\{[(185 + 19) \div 12 + 13] \div 2 + 66\} \div 9$   
 (d)  $3 \times \{81 + [13 - (7 + 5) \div 3]\}$
7. Fill in the correct operations to make the following mathematical sentences true.  
 (a)  $24 \times 3 + 6 \square 2 = 75$  (b)  $54 + 7 \square 3 - 20 \div 4 = 70$   
 (c)  $21 \div 3 \square 7 - 6 \square 4 = 47$  (d)  $16 \square 8 - 9 \square 9 \times 2 = 0$
8. Insert brackets to make the following mathematical sentences true.  
 (a)  $10 + 15 \times 5 + 15 \div 5 = 70$  (b)  $38 + 21 - 7 \times 15 = 248$   
 (c)  $32 - 13 \times 16 - 5 = 209$  (d)  $18 \div 12 - 9 \times 2 = 3$
9. Check your answers for questions 1 to 6 using a calculator. Show the 'keying order' for question 6.

**Exercise 1.2** (p. 6)

1. (a) 23            (b) 16            (c) 10  
    (d) 58            (e) 111           (f) 64
2. (a) 48            (b) 3              (c) 245  
    (d) 15
3. (a) 1              (b) 18            (c) 13  
    (d) 23
4. (a) 880           (b) 12            (c) 418  
    (d) 13
5. (a) 176           (b) 1 071        (c) 273  
    (d) 0
6. (a) 17 332        (b) 137           (c) 9  
    (d) 270
7. (a) +              (b) ×            (c) ×, +  
    (d) ÷, +
8. (a)  $10 + 15 \times (5 + 15) + 5 = 70$   
    or  $10 + 15 \times [(5 + 15) \div 5] = 70$   
    (b)  $38 + (21 - 7) \times 15 = 248$   
    (c)  $(32 - 13) \times (16 - 5) = 209$   
    (d)  $18 \div [(12 - 9) \times 2] = 3$