UNIT 4   *Rounding and Estimating*   **Extra Exercises 4.1**

1.   Calculate:

(a) $28 + 47$ (b) $66 + 92$ (c) $84 + 37$

(d) $168 - 54$ (e) $181 - 124$ (f) $362 - 149$

(g) 18×5 (h) 19×21 (i) 32×9

(j) 57×16 (k) 82×13 (l) 147×6

(m) $515 \div 5$ (n) $504 \div 4$ (o) $1841 \div 7$

2.   Calculate:

(a) $3.6 + 2.7$ (b) $4.2 + 0.62$ (c) $1.4 + 3.71$

(d) $8.2 - 0.6$ (e) $5.7 - 1.11$ (f) $19.2 - 7.03$

(g) 3×1.8 (h) 4.2×1.5 (i) 3.6×1.2

UNIT 4   *Rounding and Estimating*   **Extra Exercises 4.2**

1. Calculate:

    (a) $3 \times 6 + 5 \times 7$ (b) $7 - 4 + 8 \times 3$

    (c) $3(2 + 9) - 3 \times 7$ (d) $6 \times 4 + 8 - 2$

    (e) $6(3 - 1) - 4 \times 7$ (f) $8 \times 9 - 33 \div 3$

    (g) $7 \times 4 + 4 \times 3 \div 2$ (h) $\left(4 - (-7)\right) \times 12 \div 3$

2. Put brackets into each expression to make it correct:

    (a) $3 \times 4 + 7 = 33$ (b) $15 - 7 \times 2 = 16$

    (c) $6 - 4 \div 2 + 3 = 0.4$ (d) $3 + 7 \times 8 - 5 = 30$

3. Copy each of the following expressions, filling in the missing numbers:

    (a) $5 + \boxed{} \times 4 = 33$ (b) $\left(6 - \boxed{}\right) \times 4 = 8$

    (c) $(5 + 10) \div \left(4 - \boxed{}\right) = 5$ (d) $(6 + 9) \times \left(8 - \boxed{}\right) = 30$

UNIT 4   *Rounding and Estimating*   **Extra Exercises 4.3**

1.   Entrance tickets for a swimming pool cost £1.35 each. Calculate the cost of:

 (a)   4 tickets,

 (b)   7 tickets.

 How much change will you get from a £10 note in each case?

2.   A school drama department has £30 to spend on makeup brushes. If the brushes cost £8 each, how many can be bought?

3.   Briony has a paper round. She is paid £5 per week, plus 2p for each paper she delivers. She delivers 42 papers every day, but does not work on Sundays. How much does she earn each week?

4.   A stamp costs 26p. How much do 50 of these stamps cost?

5.   Salif orders 3 shirts from a mail-order company. The shirts cost £2.39 each. He must also pay £1.22 postage. How much will his order cost?

UNIT 4 *Rounding and Estimating*   **Extra Exercises 4.4**

1. Round each of the following numbers to 3 significant figures:

    (a)   3.7162   (b)   14.551   (c)   1 473 892

    (d)   3.145   (c)   0.002162   (f)   0.01475

2. Round 374 126.5 to:

    (a)   the nearest 100,

    (b)   the nearest 1000,

    (c)   the nearest 10 000,

    (d)   4 significant figures.

3. Round each of the following numbers to the degree of accuracy specified:

    (a)   14.715 to 2 decimal places,   (b)   3.6842 to 3 decimal places,

    (c)   0.0897 to 1 decimal place,   (d)   3.4106 to 2 significant figures,

    (e)   3.9415 to 3 decimal places,   (f)   2.4999 to 1 significant figure,

    (g)   8.751 to 2 decimal places,   (h)   14.715 to 4 significant figures.

UNIT 4 *Rounding and Estimating* **Extra Exercises 4.5**

1. For each of the following calculations,

    (i) obtain an estimate,

    (ii) use a calculator to find the answer to 3 significant figures,

    (iii) compare your estimate and your answer.

    (a) 3.7×4.8 (b) 5.9×6.7

    (c) $\dfrac{8.1 + 3.7}{4.21}$ (d) $\dfrac{3.9}{8.6 - 3.9}$

    (e) 142×361 (f) $582 \div 178$

    (g) 6.7×1574 (h) $39\,417 \div 2241$

    (i) $\dfrac{874 \times 4.21}{5.9}$ (j) $\dfrac{89.5 + 14.37}{22.3}$

    (k) $\dfrac{3.74 \times 5.62}{1.887}$ (l) $\dfrac{92.6 \times 374}{247}$

2. A room has a rectangular floor with dimensions 3.72 m by 4.17 m. Estimate the area of the floor.

3. A jar of sweets contains 105 sweets. Estimate the number of sweets in 33 jars.

UNIT 4   *Rounding and Estimating*   Extra Exercises 4.6

1. Carry out the following calculations using a calculator, giving your answers correct to 3 significant figures.

(a) $\dfrac{7 - 3}{12 - 5}$

(b) $6.2 \times 8.3 - 4.7 \times 2.6$

(c) $\dfrac{8.4 - 7.3}{2.6 \times 3.7}$

(d) $\left(\dfrac{5.9 + 7.4}{6.2}\right) \times 7.1$

(e) $\dfrac{3.74 - 2.62}{8.37 - 4.26}$

(f) $\dfrac{82 \times (147 - 36)}{32}$

(g) $\dfrac{88 \times 99 \times 100}{72 - 4}$

(h) $\dfrac{(5722 - 372) \times 46}{33 \times 22}$

(i) $\dfrac{3 \times (9.2 - 3.7)}{(8.6 - 3.2) \times 4}$

(j) $\dfrac{(3.6 + 2.2) \times (3.7 - 2.1)}{2.2 - 2.1}$

Extra Exercises 4.1   Answers

1. (a) 75   (b) 158   (c) 121

    (d) 114   (e) 57   (f) 213

    (g) 90   (h) 399   (i) 288

    (j) 912   (k) 1066   (l) 882

    (m) 103   (n) 126   (o) 263

2. (a) 6.3   (b) 4.82   (c) 5.11

    (d) 7.6   (e) 4.59   (f) 12.17

    (g) 5.4   (h) 6.3   (i) 4.32

Extra Exercises 4.2   Answers

1. (a) 53   (b) 27   (c) 12   (d) 30

    (e) -16 (f) 61   (g) 34   (h) 44

2. (a) $3 \times (4 + 7) = 33$ (b) $(15 - 7) \times 2 = 16$

    (c) $(6 - 4) \div (2 + 3) = 0.4$ (d) $(3 + 7) \times (8 - 5) = 30$

3. (a) 7   (b) 4   (c) 1   (d) 6

Extra Exercises 4.3   Answers

1. (a) £5.40,   £4.60   (b) £9.45,   55p

2. 3

3. £10.04

4. £13

5. £8.39

Extra Exercises 4.4   Answers

1.   (a)   3.72   (b)   14.6   (c)   1 470 000

     (d)   3.15   (e)   0.00216   (f)   0.0148

2.   (a)   374 100   (b)   374 000   (c)   370 000   (d)   374 100

3.   (a)   14.72   (b)   3.684   (c)   0.1   (d)   3.4

     (e)   3.942   (f)   2   (g)   8.75   (h)   14.72

Extra Exercises 4.5   Answers

1.

	(i)	(ii)		(i)	(ii)
(a)	$4 \times 5 = 20$	17.76	(b)	$6 \times 7 = 42$	39.53
(c)	$\dfrac{8 + 4}{4} = 3$	2.80	(d)	$\dfrac{4}{9 - 4} = 0.8$	0.830
(e)	$100 \times 400 = 40\,000$	51 262	(f)	$600 \div 200 = 3$	3.27
(g)	$7 \times 2000 = 14\,000$	10 500	(h)	$40\,000 \div 2000 = 20$	17.6
(i)	$\dfrac{900 \times 4}{6} = 600$	624	(j)	$\dfrac{90 + 10}{20} = 5$	4.66
(k)	$\dfrac{4 \times 6}{2} = 12$	11.1	(l)	$\dfrac{90 \times 400}{200} = 180$	140

2. $4 \times 4 = 16 \text{ m}^2$

3. $100 \times 30 = 3000$

Extra Exercises 4.6   Answers

1.   (a)   0.571   (b)   39.2

     (c)   0.114   (d)   15.2

     (e)   0.273   (f)   284

     (g)   12 800   (h)   339

     (i)   0.764   (j)   92.8