





chapter 4 review

1. (a) Using a calculator, or otherwise, find the exact value of $16.2 \div 3.6 + 0.5$.
- (b) ✎ (i) By rounding each number to the nearest whole number, estimate the value of $\frac{35.451}{1.21 + 8.89}$.
- (ii) Then, by using a calculator or otherwise, find the exact value of $\frac{35.451}{1.21 + 8.89}$.
- (c) ✎ (i) By rounding each number correct to the nearest whole number, estimate the value of $\sqrt{26.23} \times \frac{1}{1.78} + (5.92)^2$.
- (ii) Using a calculator, or otherwise, evaluate $\sqrt{26.23} \times \frac{1}{1.78} + (5.92)^2$, correct to three decimal places.
2. (a) ✎ List the following decimal numbers in ascending (increasing) order: 10.123, 101.23, 1.0123, 1012.3, 0.010 123, 0.101 23
- (b) ✎ Find the exact value of each of the following:
- (i) $25^{1/2}$ (ii) $\frac{1}{0.2}$
- Hence, show that $25^{1/2} + \frac{1}{0.2} = 10$.
- (c) ✎ (i) By rounding each number correct to the nearest whole number, estimate the value of $(5.02)^2 \times \frac{1}{4.98} - \sqrt{15.88}$.
- (ii) Using a calculator, or otherwise, evaluate $(5.02)^2 \times \frac{1}{4.98} - \sqrt{15.88}$, correct to three decimal places.
3. (a) ✎ Change each of the following decimals into a fraction, and, where possible, simplify the fraction:
- (i) 0.125 (ii) 0.55 (iii) 0.85

- (b)  The following table shows the number of people who attended football matches on a particular Sunday in July.

CROKE PARK	BREAFFY PARK	THE GAELIC GROUNDS	FITZGERALD PARK
46 432	32 567	24 836	34 678


Find the total number of people who attended all four venues:

- (i) Correct to the nearest 1000. (ii) Correct to the nearest 100.
 (ii) Correct to the nearest 10.
- (c)  (i) By rounding each number correct to the nearest whole number,

estimate the value of $\sqrt{\frac{19.84 + 3.62 \times 4.1}{3.2 + 5.8}}$.

- (ii) Using a calculator, or otherwise, evaluate


$\sqrt{\frac{19.84 + 3.62 \times 4.1}{3.2 + 5.8}}$, correct to three decimal places.

4. (a)  (i) By rounding each number correct to the nearest whole number,

write down an estimate for $\frac{1}{1.27} + 4.78 - 2.13$.

- (ii) Using a calculator, or otherwise, evaluate

$\frac{1}{1.27} + 4.78 - 2.13$, correct to three decimal places.

- (b)  The time for each athlete in the Olympic 100 m athletics final is listed in the table below:

DWAYNE CHAMBERS (GB)	9.945 sec
DARREN CAMPBELL (GB)	10.002 sec
B. O'REGAN (IRELAND)	10.082 sec
MAURICE GREENE (USA)	10.045 sec
TIM MONTGOMERY (USA)	9.922 sec

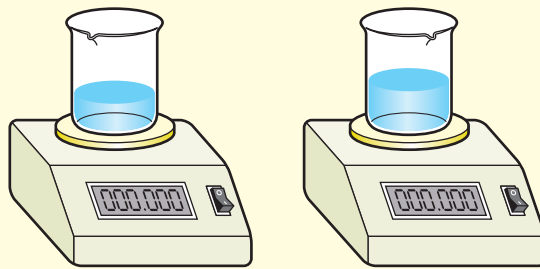
- (i) List the athletes in order of their finishing times.
 (ii) If the times were rounded correct to one decimal place, would it be possible to list the athletes in order of finishing times? Give a reason for your answer.

- (c) ✎ (i) By rounding each number to the nearest whole number,

estimate the value of $\left(\frac{7.9 + \sqrt{15.23}}{1.87}\right)^2$.

- (ii) Then evaluate $\left(\frac{7.9 + \sqrt{15.23}}{1.87}\right)^2$, correct to two decimal places.

5. (a) ✎ Two beakers were half filled with water. One beaker weighed 20.5 g, the other weighed 25.8 g.



When placed together on the same scales, the beakers weighed 46.4 g instead of the expected weight of 46.3 g. By using these figures, show that the scales are only accurate correct to one decimal place.

- (b) ✎ Calculate the value of each of the following, giving each answer in scientific notation:

(i) $5.8 \times 10^4 + 3.2 \times 10^3$

(ii) $10.6 \times 10^{-4} \div 4 \times 10^{-5}$

- (c) ✎ (i) By rounding each number to the nearest whole number,

estimate the value of $\sqrt{\frac{43.9 - \sqrt{15.23} \times 5.6}{1.87}}$.

- (ii) Then, evaluate $\sqrt{\frac{43.9 - \sqrt{15.23} \times 5.6}{1.87}}$,

correct to two decimal places.

6. (a) ✎ (i) By rounding each number correct to the nearest whole number,

write down an estimate for $\frac{3.6}{1.28} + 5.68 \times 2.43$.

- (ii) Using a calculator, or otherwise, evaluate $\frac{3.6}{1.28} + 5.68 \times 2.43$, correct to three decimal places.

- (b) ✎ The radius of a 2 cent coin is 9 mm.
If 200 coins were placed in a row, find the length in millimetres of the row of coins.
Give your answer in scientific notation.



- (c) ✎ The following table gives the population of four towns rounded to the nearest 100:

TOWN 1	TOWN 2	TOWN 3	TOWN 4
26 400	13 600	12 200	10 500

Find:

- (i) the greatest possible population of each town
(ii) the smallest possible population of each town.