



Chapter 3 Approximation And Estimation

Class Activity 1

Questions

- The exact thickness of a piece of glass is 0.004 503 m.
 - State the thickness of the piece of glass in metre correct to 2 decimal places
0.00 m (correct to 2 d.p.)

 - If you give the rounded off figure in (a) to a handy man, will it make any sense to him?
No, it will not.

- The price of an apartment is \$208 175.62.
 - What is the price correct to 1 decimal place?
\$208 175.6 (correct to 1 d.p.)

 - If you buy the apartment, is it better to mention the above rounded off price to your friend?
No, it is unnecessary to give such an exact amount.

 - What would be an appropriate rounded off figure when you talk about the above price?
\$208 000 (correct to the nearest 1000)

Class Activity 2

Questions

- Mrs Fu wants to buy 3 items that cost \$39.80, \$11.30 and \$52.50 from a supermarket. She has \$120 in her purse. How can she know if she has enough money to buy these items? To help her guess if she has enough money for the 3 items, she can estimate their total price.
 - Round off the price of each item to the nearest ten dollars.
 $\$39.80 = \underline{\quad \$40 \quad}$ (correct to the nearest ten dollars)
 $\$11.30 = \underline{\quad \$10 \quad}$ (correct to the nearest ten dollars)
 $\$52.50 = \underline{\quad \$50 \quad}$ (correct to the nearest ten dollars)
 - Using the results in (i), find the sum of the approximate costs of the 3 items.

$$\begin{aligned} \text{Sum of the approximate costs of the 3 items} &= \underline{\quad \$40 \quad} + \underline{\quad \$10 \quad} + \underline{\quad \$50 \quad} \\ &= \underline{\quad \$100 \quad} \end{aligned}$$
 - Find the sum of the exact costs of the 3 items.

$$\text{Sum of the exact costs of the 3 items} = \underline{\quad \$39.80 \quad} + \underline{\quad \$11.30 \quad} + \underline{\quad \$52.50 \quad} = \underline{\quad \$103.60 \quad}$$
 - Compare the actual sum in (b) with the estimated sum in (a). What can you conclude?
 The estimated sum is very close to the actual sum. It is easier to make an estimation than to calculate the actual total cost.
