

BASIC LEVEL

① Priya evaluates $218 \div 31$ using a calculator and she says that answer is 70.3. Without doing the actual calculation, ^①use estimation to determine whether Priya's answer is reasonable. Then ^②use a calculator to evaluate $218 \div 31$. Is your estimated value close to the actual value.

Solution:-

$$\begin{aligned} \text{Priya evaluates} &= 218 \div 31 \\ &= 70.3 \end{aligned}$$

$$\begin{aligned} \text{By estimation} &\approx 220 \div 30 \\ &= 7.33 \text{ (estimated value)} \end{aligned}$$

$$\begin{aligned} \text{By Calculator} &= 218 \div 31 \\ &= 7.03 \text{ (actual value)} \end{aligned}$$

Priya's answer is not reasonable.

Hence our estimated value is close to actual value.

Q2:- ^① Estimate each of the following without using a calculator. Then use a ^② calculator to evaluate each of the following. Are your estimated values close to the actual values?

(a) 2013×39

(b) $\sqrt{145.6} \div \sqrt[3]{65.4}$

(a) Solution:-

By estimation, $2020 \times 40 \approx 80,800$

By calculator, $2013 \times 39 = 78,507$

The estimated value is close to the actual value.

(b) Solution:-

By estimation,

$$= \sqrt{145.6} \div \sqrt[3]{65.4}$$

$$\approx \sqrt{144} \div \sqrt[3]{64}$$

$$= 12 \div 4$$

$$= 3$$

Using calculator, $\sqrt{145.6} \div \sqrt[3]{65.4} = 2.99$

The estimated value is close to the actual value.

Page #6

Q3 (i) Express 3.612 and 29.87 correct to 2 significant figures.

3.612

$$= 3 \cdot \underset{2 \text{ s.f.}}{\underset{\text{less than 5}}{6}} \underset{1}{\underset{2}{}}$$

$$= 3.6$$

29.87

$$= 2 \underset{2 \text{ s.f.}}{\underset{\text{greater than 5}}{9}} \cdot \underset{8}{\underset{7}{}}$$

$$= 30$$

(ii) Use your answer in part (i) to estimate the value of $3.612 \div 29.87$.

By estimation:

$$= 3.612 \div 29.87$$

$$\approx 3.6 \div 30$$

$$= 0.12 \text{ (2 s.f.)}$$

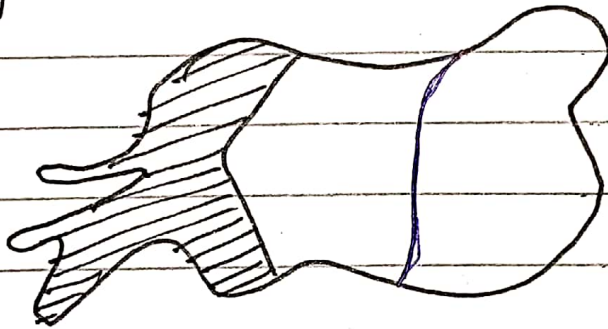
4. A car travels 274 km. It travels an average of 9.1 km on a litre of petrol. write down a calculation you could do mentally to estimate the number of litres used.

Solution:-

$$\text{Amount of Petrol used} = \frac{274}{9.1} \approx \frac{270}{9} \text{ L}$$

So $\frac{270}{9}$ L is the required estimated value.

Q5:- Estimate the ratio of the area of the shaded region to that of the unshaded region in the figure.



Solution:-

Ratio of area of shaded region to that of

unshaded region = 1 : 2 Ans

SYLLABUS FIRST ASSESSMENT

Mathematics

CLASS: 6th

* CHAPTER # 01 :

Primes, Highest Common Factor and Lowest Common Factor.

Examples: 1, 4, 5, 9, 10, 11, 12

Practise Now of chapter 1 is not included.

Exercise # 1A and 1B Basic Level Questions.

* CHAPTER # 02 :

Integers, Rational Numbers and Real Numbers.

Examples: 4(a), 6(a), 7(a)

Practise Now: Pg 29 (part 1 with options a, b, c, d)

Pg 33 (options 'a' to 'f'), pg 35 ('a' to 'j')

Exercise 2A, 2B, 2C, 2D Basic Level Questions are included.

* CHAPTER # 03 :

Approximation and Estimation.

Examples: 1, 2, pg 64 (five rules with practise now except last practise now 2 (A line segment is measured... and why?)), 4, 8)

Practise Now: Pg 66 (practise 4) only.

Exercise 3A, 3B (included que 10 also), 3C

Basic Level Questions are included.

NOTE:

For worksheet and their solution,
Exercises solutions kindly visit the
website www.bmci.edu.pk.

THANKS 😊