

Chapter - 2

Estimation

Worksheet

1. Round off to the nearest tens:

i) $453 - 450$

ii) $7326 - 7330$

iii) $24712 - 24710$

2. Round off to the nearest hundreds:

i) $847 - 800$

ii) $4972 - 5000$

iii) $62253 - 62300$

3. Round off to the nearest thousands:

i) $4507 - 5000$

ii) $18297 - 18000$

iii) $25716 - 26000$

4. Estimate the product and verify by actual calculation:

(a)
$$\begin{array}{r} 5 \\ 38 \\ \times 7 \\ \hline 266 \end{array}$$

(b)
$$\begin{array}{r} 3 \\ 45 \\ \times 67 \\ \hline 3015 \end{array}$$

(c)
$$\begin{array}{r} 24 \\ 225 \\ \times 8 \\ \hline 1800 \end{array}$$

(d)
$$\begin{array}{r} 5 \\ 48 \\ \times 73 \\ \hline 3504 \end{array}$$

(e)
$$\begin{array}{r} 1 \\ 602 \\ \times 45 \\ \hline 27090 \end{array}$$

5. Choose the best estimate from the possible answers given:

- (a) $3 \times 52 = (120, 150, 180)$ 150
- (b) $7 \times 31 = (210, 250, 280)$ 210
- (c) $2 \times 698 = (1000, 1200, 1400)$ 1400
- (d) $2 \times 88 = (150, 180, 200)$ 180

6. Estimate the sums by rounding off to the nearest thousands

- i) $7769 - 569 = 7,220 = 7,000$
- ii) $8976 + 4356 = 13,332 = 13,000$
- iii) $5463 \times 768 = 4,195,584 = 4,196,000$

7. Estimate each of the following using general rules

- (a) $730 + 998 = 700 + 1000 = 1700$
- (b) $796 - 314 = 800 - 300 = 500$
- (c) $12,904 + 2,888 = 13,000 + 3,000 = 16,000$
- (d) $28,292 - 21,496 = 28,000 - 21,000 = 7,000$

8. Give a rough estimate (by rounding off to nearest hundred) and also a closer estimate (by rounding off to nearest ten)

- (a) $439 + 334 + 4,317$
 439 to nearest hundred = 400
 334 to nearest hundred = 300
 $4,317$ to nearest hundred = 4,300
 $400 + 300 + 4,300 = 5,000$

\therefore Answer is 5,000

$$439 \text{ to nearest tens} = 440$$

$$334 \text{ to nearest tens} = 330$$

$$4,317 \text{ to nearest tens} = 4,320$$

$$440 + 330 + 4,320 = 5,090$$

∴ Answer is 5,090

(b) $1,08,734 - 47,599$

$$1,08,734 \text{ to nearest hundreds} = 1,08,700$$

$$47,599 \text{ to nearest hundreds} = 47,600$$

$$1,08,700 - 47,600 = 61,100$$

∴ Answer is 61,100

$$1,08,734 \text{ to nearest tens} = 1,08,730$$

$$47,599 \text{ to nearest tens} = 47,600$$

$$1,08,730 - 47,600 = 61,130$$

∴ Answer is 61,130

(c) $8325 - 491$

$$8325 \text{ to nearest hundreds} = 8,300$$

$$491 \text{ to nearest hundreds} = 500$$

$$8,300 - 500 = 7,800$$

∴ Answer is 7,800

$$8325 \text{ to nearest tens} = 8,330$$

$$491 \text{ to nearest tens} = 490$$

$$8,330 - 490 = 7,840$$

∴ Answer is 7,840

(d) $4,89,348 - 48,365$
 $4,89,348$ to nearest hundreds = $4,89,300$
 $48,365$ to nearest hundreds = $48,400$
 $4,89,300 - 48,400 = 4,40,900$
 \therefore answer is $4,40,900$

$4,89,348$ to nearest tens = $4,89,350$
 $48,365$ to nearest tens = $48,370$
 $4,89,350 - 48,370 = 4,40,980$
 \therefore answer is $4,40,980$

9. Estimate the following products using general rule:

(a) $578 \times 161 = 600 \times 200 = 6 \times 100 \times 2 \times 100 = 6 \times 2 \times 10000 = 120000$
 (b) $5281 \times 3491 = 5000 \times 3000 = 5 \times 1000 \times 3 \times 1000 = 5 \times 3 \times 1000000 = 15000000$
 (c) $1291 \times 592 = 1300 \times 600 = 13 \times 100 \times 6 \times 100 = 13 \times 6 \times 10000 = 780000$

10. Find the largest number formed by the digits 4, 3, 0, 9 rounded off to the nearest thousand.

9430 is the largest number formed by the digits 4, 3, 0, 9 rounded off to the nearest thousand.

11. There are about 310 passengers in each car of the city train. As there are 8 cars for each train, there are about 2,400 passengers in each train.

- a. 240 b. 2,400 c. 2,004

12. The first bus had 96 passengers and the second bus had 107 passengers. There are about 200 passengers into total.

- a. 100 b. 150 c. 200

13. In the morning, there are about 452 planes taking off from the Airport and 127 of the planes are delayed for more than 15 minutes. About 330 planes take off within 15 minutes of the scheduled time.

- a. 450 b. 130 c. 330

14. The distance between two bus terminals is 390 km. It takes the bus 4 hours to go from one terminal to another. The speed of the bus is about 386 km per hour.

- a. 100 b. 10 c. 386

15. In a city, there are 45,960 electric cars and 96,113 gas cars. There are about 5,100 more gas cars than electric cars.

- a. 5,000 b. 50,000 c. 5,100 ~~A pilot~~

List all the numbers which can be rounded off to 30.

25, 26, 27, 28, 29, 31, 32, 33, 34

18. List all the numbers which can be rounded off to 50.

45, 46, 47, 48, 49, 51, 52, 53, 54

19. Write the smallest and the largest numbers which are rounded off to 90.

Smallest number = 85

Largest number = 94

20. Write the smallest and the largest numbers which are rounded off to 130.

Smallest number = 125

Largest number = 134