Chapter – 4

Measurements

Ex 4.1

Question 1.
Fill in the blanks.

a. 7m 5cm = _____ cm

Answer:
7m 5cm = 7 × 100 + 5cm: 700 + 5 = 705 cm

b. 505 mm = _____ cm _____ mm

Answer:
505 mm = 505 + 100 = 50 cm 5 mm

c. 326m = _____ cm

Answer:
326 m = 326 × 100 = 32600 cm

d. 5km 30m = ____ m

Answer:
5 km 30 m : 5 × 1000 + 30 = 5000 + 30 = 5030 m

e. 650cm: _____ m _____ cm

Answer:
650 cm = 650 ÷ 100 = 6 m 50 cm

Question 2.
True or false.

a) 600 m is 6mm.

Answer:
False (∵6 cm)

b) 7000 m is 7 km.

Answer:
True

c) 400 cm is 4 km.

Answer:
False (∵4m)

d) 770 mm is 77 cm.

Answer:
True

e) 9000m is 90 mm.

Answer:
False (∵ $9000 \times 1000 = 9000000$ mm)

Question 3.
Find the sum of the following

a. 17 m 45 cm + 52 m 30 cm

Answer:

m	cm
17	450
52	300
69	750

$= 69$ m 750 cm

b. 75 km 400 m + 37 km 300 m + 52 km 750 m

Answer:
$400 + 300 + 750 = 1450$ m

1450 m = 1 km 450 m

m	cm
1	
75	400
37	300
52	750
165	450

= 165 km 450 m

c. 4 cm 8 mm + 5 cm 9 mm

Answer:
8mm + 9mm = 17 mm = 1 cm 7 mm

cm	mm
1	
4	8
5	9
10	7

= 1 cm 7mm

Question 4.
Subtract the following

a. 15 km 450 m – 13 km 200 m.

Answer:
Difference = 15 km 450 m – 13 km 200 m
= 2 km 250 m

km	m
15	450
13	200
2	250

b. 750 m 840 mm – 370m 480 mm.

Answer:
Difference = 750 m 840 mm – 370m 480 mm
= 380 m 360 mm

m	mm
750	840
370	480
380	360

c. 5 km 400 m – 3 km 350 m

Answer:
Difference = 5 km 400 m – 3 km 350 m
= 2 km 50 mm

km	m
5	400
3	350
2	50

Question 5.
Multiply the following.

a. 350 m 45c m × 7

Answer:
$45 \times 7 = 315$ m
= 3 m 15 m

m	cm
350	45
×	7
2453	15

350 m 45 cm × 7 = 2453 km 45 cm

b. 25 km 300 m × 6

Answer:
$300 \times 6 = 1800$ m
$= 1$ km 800 m

km	cm
25	300
×	6
151	800

25 km 300 m × 6 = 151 km 800 mm

c. 37 m 350 mm × 8

Answer:
$350 \times 8 = 2800$ mm
$= 2$ m 800 mm

m	mm
37	350
×	8
298	800

37 m 350 mm × 8 = 298 m 800 mm

Question 6.
Divide the following

a. 950 km 800 m ÷ 5

Answer:

```
      km    cm
      190   160
   ┌─────────────
 5 │  950   800
   │  -5
   ├─────────────
   │   45
   │  -45
   ├─────────────
   │    0     8
   │         -5
   ├─────────────
   │         30
   │        -30
   ├─────────────
   │          0
```

950 km 800 ÷ 5 = 190 km 160 m

b. 49 m 770 mm ÷ 7

Answer:

```
      m     mm
      7     110
   ┌─────────────
 7 │  49    770
   │ -49
   ├─────────────
   │   0     7
   │        -7
   ├─────────────
   │   0     7
   │        -7
   ├─────────────
   │         0
```

49 m 770 mm ÷ 7 = 7 m 110 mm

c. 172 m 48 cm ÷ 4

Answer:

```
        m      cm
       43      12
    ┌─────────────
  4 │  172     48
    │  -16
    ├─────────────
    │   12
    │  -12
    ├─────────────
    │    0      4
    │          -4
    ├─────────────
    │          08
    │          -8
    ├─────────────
    │           0
```

172 m 48 cm ÷ 4 = 43 m 12 cm

Life Related Problems

Question 7.
Answer the following:

a. Saravanan had chosen to drive his vehicle from puducherry to Chennai for a distance of 165 Km. While starting his vehicle, the odometre showed 000157 Km, Find the reading of the odometre, when he reach Chennai?
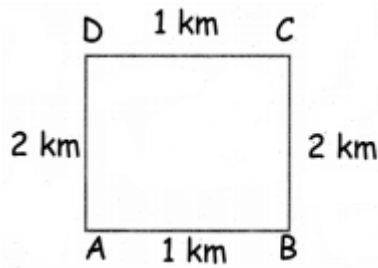
Answer:
Distance form Pudicherry to Chennai = 165 km
Odometer showed = 000157 km
Reading of odometer after reached Chennai = 165 km + 000157 km
= 000322 km.

b. Karthik Raja decided to travel from A. He moves l Km in east to reach B. Then he goes 2 Km towards north and reaches C. Then he goes 1 Km towards west and reaches D. If he goes 2 Km towards South, Where would he reach? Draw apt Diagram and Justify. Also find out the total distance travelled by him.

Answer:

He would reach = A
Total Distance = 1 + 2 + 1 + 2 = 6 km

c. Sangeetha has just finished building a new house with garden area. She measured the garden area and found it to be 6m x 6m. Suppose she has to put a pole every lm, how many poles are required? Each pole is of height 1.5m from the ground, What should be the total length of the fencing material to fence the garden?

Answer:
Side of the Garden = 6m
No. of poles required = 6 + 6 + 6 + 6 = 24
The total length of the fencing material to fence the garden
= 24 × 1.5
= 36 m

d. One student needs lm 25 cm cloth to stich a shirt. What is the total length of clothes need to stitch a class of 22 students?

Answer:
Cloth is needed for one student = 1 m 25 cm
Total cloth is needed for 22 students
= 1 m 25 cm × 22
= 27 m 50 cm

```
  25 × 22
 _____
   50
 50
 _____
 550
 _____
 550 cm =
 5 m 50 cm
```

e. The distance from village A to village B is 3 km 450 m. The distance from village B to village C is 5 km 350 m. What will be the total length of the road, if the road is laid from village A to village C?

Answer:
Distance from village A to Village B = 3 km 450 m
Distance from village B to village C = 5 km 350 m
The distance from A to C = 8 km 800 m

km	m
3	450
5	350
+ 8	800

InText Questions

Try These (Text Book Page No. 65)

Convert into millimeters

Question 1.
90 cm

Answer:
90 cm = 90 × 10
= 900 mm

Question 2.
5 cm 8 mm

Answer:
5 cm 8 mm = 5 × 10 + 8 mm
= 50 + 8 = 58 mm

Question 3.
5 m 9 mm

Answer:

$5\text{ m }9\text{ mm} = 5 \times 1000 + 9\text{ mm}$
$= 5009\text{ mm}$

Convert into centimeter

Question 1.
8 m

Answer:
$8\text{ m} = 8 \times 100$
$= 800\text{ cm}$

Question 2.
6 m 4 cm

Answer:
$6\text{m}4\text{cm} = 6 \times 10 + 4 = 600 + 4$
$= 604\text{ cm}$

Question 3.
80 mm

Answer:
$80\text{mm} = 80 \times 10$
$= 8\text{ cm}$

Convert into meter

Question 1.
8 km 400 m

Answer:
$8\text{ km }400\text{ m} = (8 \times 1000) + 400\text{ m} = 8000 + 400 = 8400\text{ m}$

Question 2.
900 cm

Answer:

900 cm = 900 + 100 = 9 m

Question 3.

3500 mm

Answer:

3500 mm = 3500 + 1000 = 3 m 500

```
         3
1000 ⟌ 3500
     -3000
      ─────
       500
```

Try These (Text Book Page No. 67)

Convert into kilometers.

Question 1.

5430 m

Answer:

5430 m = 5430 + 1000 = 5 km 430 m

```
         5
1000 ⟌ 5430
     -5000
      ─────
       430
```

Question 2.

7500 m

Answer:

7500 m = 7500 + 1000 = 7 km 500 m

```
         7
1000 ⟌ 7500
     -7000
      ─────
       500
```

Question 3.

8000 m

Answer:

$8000 \text{ m} = 8000 + 1000 = 8 \text{ km}$

```
          8
1000 | 8000
       -8000
          0
```

Subtract the following

Question 1.
1075 km 400 m – 27 km 350 m

Answer:
Difference = 1075 km 400 m – 27 km 350 m
= 1048 km 50 m

Km	m
1075	400
27	350
1048	050

Question 2.
250 m 25 cm – 127 m 18 cm

Answer:
Difference = 250 m 25 cm – 127 m 18 cm
= 123 m 7 cm

m	m
250	25
127	18
123	7

Question 3.
27 km 900 m – 18 km 850 m

Answer:

Difference = 27 km 900 m – 18 km 850 m
= 9 km 50 m

km	m
27	900
18	850
9	50

Try These (Text Book Page No. 69)

a. 7 m 20 cm × 6

Answer:
20 cm × 6 = 120 cm
= 1m 20 cm

m	cm
7	20
×	6
43	20

7 m 20 cm × 6 = 43 m 20 cm

b. 15 m 75 cm × 5

Answer:
75 cm × 5 = 375 cm
= 3m 75 cm

m	cm
15	75
×	5
78	75

15 m 75 cm × 5 = 78 m 75 cm

c. 15 km 200 m × 4

Answer:

```
      km      m
      15     200
   ×            4
   ─────────────────
      60     800
```

15 km 200 m × 4 = 60 km 800 m

d. 35 km 500 m × 5

Answer:
500 m × 5 = 2500 m
= 2 km 500 m
```
      km      m
      35     500
   ×            5
   ─────────────────
     177     500
```

35 km 500 m × 5 = 177 km 500 m

Try These (Text Book Page No. 70)

a. 750 m 45 cm ÷ 5
b. 49 km 630 m ÷ 7
c. 770 km 550 m ÷ 11

Answer:
a. 750 m 45 cm ÷ 5
```
            m      cm
           150      9
      ┌─────────────────
    5 │   750      45
      │   -5
      │  ───────
      │    25
      │   -25
      │  ───────
      │     0       0
```

750 m 45 cm ÷ 5 = 150 m 9 cm

b. 49 km 630 m ÷ 7

	km	m
	7	90
7	49	630
	-49	
		63
		63
		0

49 km 630 m ÷ 7 = 7 km 90 m

c. 770 km 550 m ÷ 11

	km	cm
	70	50
11	770	550
	-77	
	0	55
		55
		0

770 km 550 m ÷ 11 = 70 km 50 m