St. Andrews Scots Sr. Sec. School

9th Avenue I.P Extn. Patparganj, Delhi-110092

Session 2022-2023

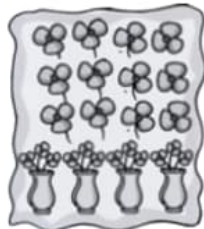Class III   Subject :Mathematics

6. Division

Solutions

Exercise 6A

1. (b) $12 \div 3 = \boxed{4}$

   (c) $18 \div 9 = \boxed{2}$

   (d) $14 \div 2 = \boxed{7}$

2. (b) $15 \div 3 = \underline{5}$

   $$\left.\begin{array}{l} 15 - 3 = 12 \\ 12 - 3 = 9 \\ 9 - 3 = 6 \\ 6 - 3 = 3 \\ 3 - 3 = 0 \end{array}\right\} 5 \text{ times}$$
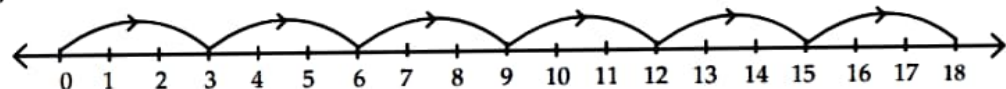
3. (a) $10 \div 2 =$
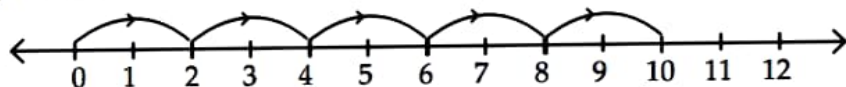
   As we move 5 times to reach at 10. Hence, $10 \div 2 = 5$

   (b) $18 \div 3 =$

   As we move 6 times to reach at 18. Hence $18 \div 3 = 6$

Exercise 6B

1. (a) $8 \times 4 = 32$

$32 \div 8 = 4$
$32 \div 4 = 8$

   (b) $9 \times 3 = 27$

$27 \div 9 = 3$
$27 \div 3 = 9$

   (c) $4 \times 6 = 24$

$24 \div 4 = 6$
$24 \div 6 = 4$

   (d) $6 \times 11 = 66$

$66 \div 6 = 11$
$66 \div 11 = 6$

   (e) $4 \times 9 = 36$

$36 \div 4 = 9$
$36 \div 9 = 4$

   (f) $7 \times 8 = 56$

$56 \div 7 = 8$
$56 \div 8 = 7$

2. (a) $63 \div 7 = 9$ (b) $9 \div 9 = 1$ (c) $72 \div 8 = 9$
$9 \times 7 = 63$ $9 \times 1 = 9$ $9 \times 8 = 72$

   (d) $55 \div 5 = 11$ (e) $70 \div 7 = 10$ (f) $24 \div 3 = 8$
$11 \times 5 = 55$ $10 \times 7 = 70$ $8 \times 3 = 24$

   (g) $36 \div 3 = 12$ (h) $48 \div 6 = 8$ (i) $90 \div 9 = 10$
$12 \times 3 = 36$ $8 \times 6 = 48$ $10 \times 9 = 90$

Exercise 6C

1. (a) 8   (b) 14   (c) 43   (d) 1
(e) 1   (f) 1   (g) 27   (h) 16
(i) 0   (j) 17   (k) 1   (l) 0

2. (i) (a) 0   (ii) (c) 1

Exercise 6D

1. (a)
```
     13
  3)39
   -3↓
     9
   -9
     0
```
Check:
Since, $13 \times 3 = 39$
Hence, answer
is correct.

(b)
```
     21
  4)84
   -8↓
     04
    -4
     0
```
Check:
Since, $21 \times 4 = 84$
Hence answer
is correct.

(c)
```
     11
  5)55
   -5↓
     5
    -5
     0
```
Check:
Since, $11 \times 5 = 55$
Hence, answer
is correct.

(d)
```
     11
  7)77
   -7↓
     07
    -7
     0
```
Check:
Since, $11 \times 7 = 77$
Hence, answer
is correct.

(e)
```
     12
  4)48
   -4↓
     08
    -8
     0
```
Check:
Since, $12 \times 4 = 48$
Hence, answer
is correct.

(f)
```
     11
  6)66
   -6↓
     06
    -6
     0
```
Check:
Since, $11 \times 6 = 66$
Hence, answer
is correct.

(g)
$$2\overline{)84}$$ quotient 42
− 8↓
04
− 4
0

Check:
Since, 42 × 2 = 84
Hence, answer
is correct.

(h)
$$3\overline{)36}$$ quotient 12
− 3↓
06
− 6
0

Check:
Since, 12 × 3 = 36
Hence, answer
is correct.

(i)
$$2\overline{)42}$$ quotient 21
− 4↓
02
− 2
0

Check:
Since, 21 × 2 = 42
Hence, answer
is correct.

2. (a)
$$2\overline{)66}$$ quotient 33
− 6↓
06
− 6
0

(b)
$$8\overline{)88}$$ quotient 11
− 8↓
08
− 8
0

(c)
$$3\overline{)93}$$ quotient 31
− 9↓
03
− 3
0

(d)
$$4\overline{)44}$$ quotient 11
− 4↓
04
− 4
0

Exercise 6E

1. (a)
$$2\overline{)444}$$ quotient 222
− 4↓
04
− 4↓
04
− 4
0   Ans: 222

(b)
$$3\overline{)693}$$ quotient 231
− 6↓
09
− 9↓
03
− 3
0   Ans: 231

(c)
$$5\overline{)505}$$ quotient 101
− 5↓↓
005
− 5
0   Ans: 101

(d)
$$
\begin{array}{r}
133 \\
3\overline{)399}(\\
-3 \\
\hline
09 \\
-9 \\
\hline
09 \\
-9 \\
\hline
0 \quad \text{Ans: 133}
\end{array}
$$

(e)
$$
\begin{array}{r}
302 \\
2\overline{)604}(\\
-6 \\
\hline
004 \\
-4 \\
\hline
0 \quad \text{Ans: 302}
\end{array}
$$

(f)
$$
\begin{array}{r}
300 \\
3\overline{)900}(\\
-9 \\
\hline
000 \quad \text{Ans: 300}
\end{array}
$$

(g)
$$
\begin{array}{r}
1210 \\
4\overline{)4840}(\\
-4 \\
\hline
08 \\
-8 \\
\hline
04 \\
-4 \\
\hline
00 \quad \text{Ans: 1210}
\end{array}
$$

(h)
$$
\begin{array}{r}
2131 \\
3\overline{)6393}(\\
-6 \\
\hline
03 \\
-3 \\
\hline
09 \\
-9 \\
\hline
03 \\
-3 \\
\hline
0 \quad \text{Ans: 2131}
\end{array}
$$

(i)
$$
\begin{array}{r}
1110 \\
5\overline{)5550}(\\
-5 \\
\hline
05 \\
-5 \\
\hline
05 \\
-5 \\
\hline
00 \quad \text{Ans: 1110}
\end{array}
$$

(j)
$$
\begin{array}{r}
4200 \\
2\overline{)8400}(\\
-8 \\
\hline
04 \\
-4 \\
\hline
000 \quad \text{Ans: 4200}
\end{array}
$$

(k)
$$
\begin{array}{r}
3000 \\
3\overline{)9000}(\\
-9 \\
\hline
0000 \quad \text{Ans: 3000}
\end{array}
$$

(l)
$$
\begin{array}{r}
2021 \\
4\overline{)8084}(\\
-8 \\
\hline
008 \\
-8 \\
\hline
04 \\
-4 \\
\hline
0 \quad \text{Ans: 2021}
\end{array}
$$

2. (a)
$$
\begin{array}{r}
3002 \\
3\overline{)9006}(\\
-9 \\
\hline
0006 \\
-6 \\
\hline
0 \quad \text{Ans: 3002}
\end{array}
$$

(b)
$$
\begin{array}{r}
222 \\
3\overline{)666}(\\
-6 \\
\hline
06 \\
-6 \\
\hline
06 \\
-6 \\
\hline
0 \quad \text{Ans: 222}
\end{array}
$$

(c)
$$
\begin{array}{r}
333 \\
3\overline{)999}(\\
-9 \\
\hline
09 \\
-9 \\
\hline
09 \\
-9 \\
\hline
0 \quad \text{Ans: 333}
\end{array}
$$

(d)
$$
\begin{array}{r}
2120 \\
3\overline{)6360}(\\
-6 \\
\hline
03 \\
-3 \\
\hline
06 \\
-6 \\
\hline
0 \quad \text{Ans: 2120}
\end{array}
$$

(e)
```
      2211
  4) 8844 (
    - 8
    ────
     08
    - 8
    ────
     04
    - 4
    ────
     04
     - 4
    ────
      0   Ans: 2211
```

(f)
```
      2400
  2) 4800 (
    - 4
    ────
     08
    - 8
    ────
     000   Ans: 2400
```

(g)
```
      111
  7) 777 (
    - 7
    ────
     07
    - 7
    ────
     07
     - 7
    ────
      0  Ans: 111
```

(h)
```
      2011
  4) 8044 (
    - 8
    ────
     04
    - 4
    ────
     04
     - 4
    ────
      0  Ans: 2011
```

(i)
```
      1011
  5) 5055 (
    - 5
    ────
     005
     - 5
    ────
      05
     - 5
    ────
      0  Ans: 1011
```

(j)
```
      1403
  2) 2806 (
    - 2
    ────
     08
    - 8
    ────
     006
     - 6
    ────
      0  Ans: 1403
```

(k)
```
      2000
  4) 8000 (
    - 8
    ────
     0000   Ans: 2000
```

(l)
```
      123
  3) 369 (
    - 3
    ────
     06
    - 6
    ────
     09
    - 9
    ────
     0  Ans: 123
```

Exercise 6F

1. **(a)**
$$\begin{array}{r} 3 \\ 3\overline{)10} \\ -9 \\ \hline 1 \end{array}$$

Check: Divisor = 3, Quotient = 3, Remainder = 1
Divisor × Quotient + Remainder = 3 × 3 + 1 = 10
which is equal to dividend, so answer is correct.

(b)
$$\begin{array}{r} 7 \\ 2\overline{)15} \\ -14 \\ \hline 1 \end{array}$$

Check: Divisor = 2, Quotient = 7, Remainder = 1
Divisor × Quotient + Remainder = 2 × 7 + 1 = 15
which is equal to dividend, so answer is correct.

(c)
$$\begin{array}{r} 21 \\ 3\overline{)65} \\ -6\downarrow \\ \hline 05 \\ -3 \\ \hline 2 \end{array}$$

Check: Divisor = 3, Quotient = 21, Remainder = 2
Divisor × Quotient + Remainder 3 × 21 + 2 = 63 + 2 = 65
which is equal to dividend. So answer is correct.

(d)
$$\begin{array}{r} 131 \\ 3\overline{)394} \\ -3\downarrow \\ \hline 09 \\ -9\downarrow \\ \hline 04 \\ -3 \\ \hline 1 \end{array}$$

Check: Divisor = 3, Quotient = 131, Remainder = 1
Divisor × Quotient + Remainder
= 3 × 131 + 1 = 393 + 1 = 394
which is equal to dividend. So, answer is correct.

(e)
$$\begin{array}{r} 1323 \\ 2\overline{)2647} \\ -2\downarrow \\ \hline 06 \\ -6\downarrow \\ \hline 04 \\ -4\downarrow \\ \hline 07 \\ -6 \\ \hline 1 \end{array}$$

Check: Divisor = 2, Quotient = 1323, Remainder = 1
Divisor × Quotient + Remainder
= 2 × 1323 + 1 = 2646 + 1 = 2647
which is equal to dividend. So, answer is correct.

(f)

$$\begin{array}{r} 3211 \\ 3\overline{)9635}(\\ -9\downarrow \\ \hline 06 \\ -6\downarrow \\ \hline 03 \\ -3\downarrow \\ \hline 05 \\ -3 \\ \hline 2 \end{array}$$

Check: Divisor = 3, Quotient = 3211, Remainder = 2

Divisor × Quotient + Remainder

= 3 × 3211 + 2 = 9633 + 2 = 9635

which is equal to dividend.

So, answer is correct.

2. (a)

$$\begin{array}{r} 4321 \\ 2\overline{)8643}(\\ -8\downarrow \\ \hline 06 \\ -6\downarrow \\ \hline 04 \\ -4\downarrow \\ \hline 03 \\ -2 \\ \hline 1 \end{array}$$

Quotient = 4321
Remainder = 1

(b)

$$\begin{array}{r} 320 \\ 3\overline{)962}(\\ -9\downarrow \\ \hline 06 \\ -6\downarrow \\ \hline 02 \end{array}$$

Quotient = 320
Remainder = 2

(c)

$$\begin{array}{r} 201 \\ 4\overline{)807}(\\ -8\downarrow\downarrow \\ \hline 007 \\ -4 \\ \hline 3 \end{array}$$

Quotient = 201
Remainder = 3

(d)

$$\begin{array}{r} 3202 \\ 3\overline{)9607}(\\ -9\downarrow \\ \hline 06 \\ -6\downarrow\downarrow \\ \hline 007 \\ -6 \\ \hline 1 \end{array}$$

Quotient = 3202
Remainder = 1

(e)

$$\begin{array}{r} 2013 \\ 2\overline{)4027}(\\ -40\downarrow \\ \hline 2 \\ -2\downarrow \\ \hline 07 \\ -6 \\ \hline 1 \end{array}$$

Quotient = 2013
Remainder = 1

(f)

$$\begin{array}{r} 4130 \\ 2\overline{)8261}(\\ -8\downarrow \\ \hline 02 \\ -2\downarrow \\ \hline 06 \\ -6\downarrow \\ \hline 1 \end{array}$$

Quotient = 4130
Remainder = 1

(g)

$$\begin{array}{r} 2002 \\ 4\overline{)8009}(\\ -8\downarrow \\ \hline 0009 \\ -8 \\ \hline 1 \end{array}$$

Quotient = 2002
Remainder = 1

(h)

$$\begin{array}{r} 110 \\ 9\overline{)996}(\\ -9\downarrow \\ \hline 09 \\ -9\downarrow \\ \hline 6 \end{array}$$

Quotient = 110
Remainder = 6

(i)

$$\begin{array}{r} 121 \\ 3\overline{)365}(\\ -3\downarrow \\ \hline 06 \\ -6\downarrow \\ \hline 05 \\ -3 \\ \hline 2 \end{array}$$

Quotient = 121
Remainder = 2

(j)
```
       2322
   3)6968(
    -6↓||
     ─────
     09
    -9↓
     ─────
     06
    -6↓
     ─────
     08
    -6
     ─────
      2
```
Quotient = 2322
Remainder = 2

(k)
```
      110
   5)554(
   -5↓
    ─────
    05
   -05↓
    ─────
    04
   -0
    ─────
     4
```
Quotient = 110
Remainder = 4

(l)
```
      122
   4)489(
   -4↓
    ─────
    08
   -8↓
    ─────
    09
   -8
    ─────
     1
```
Quotient = 122
Remainder = 1

Exercise 6G

1. (a)
```
       2
   10)25(
   -20
    ─────
     5
```
Quotient = 2
Remainder = 5

(b)
```
       35
   10)351(
   -35↓
    ─────
    51
   -50
    ─────
    01
```
Quotient = 35
Remainder = 1

(c)
```
       77
   10)777(
   -70↓
    ─────
    77
   -70
    ─────
    07
```
Quotient = 77
Remainder = 7

(d)
```
       64
   10)640(
   -60↓
    ─────
    40
   -40
    ─────
    00
```
Quotient = 64
Remainder = 0

(e)
```
       41
   10)415(
   -40↓
    ─────
    15
   -10
    ─────
    05
```
Quotient = 41
Remainder = 5

(f)
```
       56
   10)565(
   -50↓
    ─────
    65
   -60
    ─────
    05
```
Quotient = 56
Remainder = 5

2. (a)
```
        8
   100)835
   -800
    ─────
    35
```
Quotient = 8
Remainder = 35

(b)
```
        4
   100)467
   -400
    ─────
    67
```
Quotient = 4
Remainder = 67

(c)
```
        19
   100)1919
   -100↓
    ─────
    919
   -900
    ─────
    19
```
Quotient = 19
Remainder = 19

$$
\begin{array}{r}
2 \\
\text{(d)} \quad 100\overline{)2005} \\
-200 \\
\hline
05 \\
\end{array}
$$

Quotient = 2
Remainder = 5

$$
\begin{array}{r}
31 \\
\text{(e)} \quad 100\overline{)3154} \\
-300 \\
\hline
154 \\
-100 \\
\hline
54 \\
\end{array}
$$

Quotient = 31
Remainder = 54

$$
\begin{array}{r}
98 \\
\text{(f)} \quad 100\overline{)9890} \\
-900 \\
\hline
890 \\
-800 \\
\hline
90 \\
\end{array}
$$

Quotient = 98
Remainder = 90

3. (a)
$$
\begin{array}{r}
9 \\
1000\overline{)9000} \\
-9000 \\
\hline
0 \\
\end{array}
$$

Quotient = 9
Remainder = 0

(b)
$$
\begin{array}{r}
2 \\
1000\overline{)2959} \\
-2000 \\
\hline
959 \\
\end{array}
$$

Quotient = 2
Remainder = 959

(c)
$$
\begin{array}{r}
3 \\
1000\overline{)3435} \\
-3000 \\
\hline
435 \\
\end{array}
$$

Quotient = 3
Remainder = 435

(d)
$$
\begin{array}{r}
8 \\
1000\overline{)8888} \\
-8000 \\
\hline
888 \\
\end{array}
$$

Quotient = 8
Remainder = 888

(e)
$$
\begin{array}{r}
1 \\
1000\overline{)1009} \\
-1000 \\
\hline
9 \\
\end{array}
$$

Quotient = 1
Remainder = 9

(f)
$$
\begin{array}{r}
7 \\
1000\overline{)7348} \\
-7000 \\
\hline
348 \\
\end{array}
$$

Quotient = 7
Remainder = 348

4. (a)

Th	H	T	O
8	6	5	4

The digit '4' at the ones place is remainder and 865 is the quotient. (Division rule by "10")

(b)

Th	H	T	O
	5	6	4

The digits at the tens and ones place i.e. "64" is the remainder.

And remaining part of the number i.e. "5" is the quotient.

(c)

Th	H	T	O
①	③	4	7

The digits at the tens and ones place i.e "47" is the remainder.

And remaining part of the number i.e. "13" is the quotient.

(d)

Th	H	T	O
⑤	③	7	9

The digits at the tens and ones place i.e "79" is the remainder.

And remaining part of the number i.e. "53" is the quotient.

(e)

Th	H	T	O
⑤	②	0	0

The digits at the tens and ones place i.e "0" is the remainder.

And remaining part of the number i.e. "52" is the quotient.

(f)

Th	H	T	O
	⑥	⑧	7

The digits at the ones place i.e. 7 is the remainder.

And remaining part of the number i.e. "68" is the quotient.

(g)

Th	H	T	O
⑧	6	5	4

The digits at the hundreds, tens and ones place i.e "654" is the remainder.

And remaining part of the number i.e. "8" is the quotient.

(h)

Th	H	T	O
②	8	4	5

The digits at the hundreds, tens and ones place i.e. "845" is the remainder.

And the remaining part of the number i.e. "2" is the quotient.

(i)

Th	H	T	O
	⑦	⑥	3

The digits at ones place i.e. "3" is the remainder.

And the remaining part of the number i.e. "76" is the quotient.

(j)

Th	H	T	O
⑨	0	0	0

The digits at the hundreds, tens and ones place i.e. "000" or "0" is the remainder.

And the remaining part of the number i.e. "9" is the quotient.

(k)

Th	H	T	O
4	8	3	2

The digits at tens and ones place i.e. "32" is the reminder.

And remaining part of the number i.e "48" is the quotient.

(l)

Th	H	T	O
②	7	7	4

The digits at the hundreds, tens and ones place i.e. "774" is the remainder.

And the remaining part of the number i.e. "2" is the quotient.

Exercise 6H

1. 1 week = 7 days

   In 7 days, no. of pizzas sold = 49

   In one day no. of pizzas sold = 49 ÷ 7 = 7 pizzas

$$\begin{array}{r} 7 \\ 7\overline{)49} \\ -49 \\ \hline 0 \end{array}$$

2. Total no. of plants = 497

   In one row no. of plants = 7

   Thus, no. of rows = 497 ÷ 7 = 71.

$$\begin{array}{r} 71 \\ 7\overline{)497} \\ -49 \\ \hline 07 \\ -7 \\ \hline 0 \end{array}$$

3. Total no. of muffins = 360

   In one box, no. of muffins = 4

   Thus, no. of boxes = 360 ÷ 4 = 90 boxes.

$$\begin{array}{r} 90 \\ 4\overline{)360} \\ -36 \\ \hline 00 \end{array}$$

4. Total no. of fishes = 56

In one tank, no. of fishes = 7

Thus, no. of fish tank = 56 ÷ 7 = 8

$$\begin{array}{r} 8 \\ 7\overline{)56} \\ -56 \\ \hline 0 \end{array}$$

5. Total money collected = ₹ 284

Cost of one ticket = ₹ 4

Thus, no. of tickets = 284 ÷ 4 = 71

$$\begin{array}{r} 71 \\ 4\overline{)284} \\ -28 \\ \hline 04 \\ -4 \\ \hline 0 \end{array}$$

6. In 1 day, cow gives milk = 11 litres

Total quantity of milk = 2244 litres

Thus, no. of days = 2244 ÷ 11 = 204

$$\begin{array}{r} 204 \\ 11\overline{)2244} \\ -22\downarrow\downarrow \\ \hline 044 \\ -44 \\ \hline 0 \end{array}$$

7. Number of books in shelves = 864

Number of shelves = 9

Number of books in each shelf = 864 ÷ 9 = 96

$$\begin{array}{r} 96 \\ 9\overline{)864} \\ -81\downarrow \\ \hline 54 \\ -54 \\ \hline 0 \end{array}$$

8. Total length of rope = 192 m

Number of students = 8

Thus, each student will get 192 ÷ 8 = 24 m length of rope.

$$\begin{array}{r} 24 \\ 8\overline{)192} \\ -16\downarrow \\ \hline 32 \\ -32 \\ \hline 0 \end{array}$$

9. A bottle of juice costs = ₹ 9

Total money = ₹ 1835

Thus, number of bottles which can be bought by ₹ 1835 = 1835 ÷ 9 = 203

Number of bottle juice bought from ₹ 1835 = 203

And money left after purchase = ₹ 8

$$\begin{array}{r} 203 \\ 9\overline{)1835(} \\ -18\downarrow\downarrow \\ \hline 35 \\ -27 \\ \hline 8 \end{array}$$

10. Total number of Apples = 920

    Total number of boxes = 8

    Thus, number of apples in
       each box = 920 ÷ 8 = 115

$$\begin{array}{r} 115 \\ 8\overline{)920(} \\ -8 \\ \hline 12 \\ -8 \\ \hline 40 \\ -40 \\ \hline 0 \end{array}$$

Review Time

1. 9 and 7 are the factors of 63.

    i.e. 9 × 7 = <u>63</u>

2. 29 ÷ [1] = 29

3.
$$\begin{array}{r} 141 \\ 5\overline{)705(} \\ -5 \\ \hline 20 \\ -20 \\ \hline 5 \\ -5 \\ \hline 0 \end{array}$$
Quotient = 141

4. (a)
$$\begin{array}{r} 68 \\ 10\overline{)688(} \\ -60 \\ \hline 88 \\ -80 \\ \hline 8 \end{array}$$
Quotient = 68
Remainder = 8

(b)
$$\begin{array}{r} 75 \\ 100\overline{)7543(} \\ -700 \\ \hline 543 \\ -500 \\ \hline 43 \end{array}$$
Quotient = 75
Remainder = 43

5.

Th	H	T	O
(9)	4	3	2

The digits at the place of hundreds, tens and ones i.e. "432" is the remainder.

And remaining part of the number i.e. "9" is the quotient.

6.
$$\begin{array}{r} 157 \\ 5\overline{)785(} \\ -5 \\ \hline 28 \\ -25 \\ \hline 35 \\ -35 \\ \hline 0 \end{array}$$
Quotient = 157
Remainder = 0