Booklet 3 (Answer Key)

Note that I added page 8 (Homework) as an extra practice if needed.

Long Division

$$
\begin{array}{r}
1\ 2 \\
5\overline{)6\ 0} \\
-5\ \downarrow \\
\hline
1\ 0 \\
-1\ 0 \\
\hline
0
\end{array}
$$

Q1. Find the quotient

1.
$$
\begin{array}{r}
0\ 4\ 3 \\
7\overline{)3\ 0\ 1} \\
-2\ 8 \\
\hline
0\ 2\ 1 \\
-\ 2\ 1 \\
\hline
0\ 0
\end{array}
$$

2.
$$
\begin{array}{r}
3\ 2\ 1\ 1 \\
2\overline{)6{,}4\ 2\ 2} \\
-6\ \downarrow \\
\hline
0\ 4 \\
-\ 4\ \downarrow \\
\hline
0\ 2 \\
-\ 2\ \downarrow \\
\hline
0\ 2 \\
-\ 2 \\
\hline
0
\end{array}
$$

3.
$$
\begin{array}{r}
0\ 2\ 3 \\
8\overline{)1\ 8\ 4} \\
-1\ 6\ \downarrow \\
\hline
0\ 2\ 4 \\
-\ 2\ 4 \\
\hline
0\ 0
\end{array}
$$

4.
$$
\begin{array}{r}
0\ 6\ 0\ 7 \\
4\overline{)2{,}4\ 2\ 8} \\
-2\ 4 \\
\hline
0\ 0\ 2\ 8 \\
-\ 2\ 8 \\
\hline
0\ 0
\end{array}
$$

$$
\begin{array}{r}
2762 \\
3\overline{)8{,}286} \\
-6 \\
\hline
22 \\
21 \\
\hline
0\ 18 \\
18 \\
\hline
0\ 0\ 6 \\
6 \\
\hline
0
\end{array}
$$

6.
$$
\begin{array}{r}
0\ 963 \\
6\overline{)5{,}778} \\
-54 \\
\hline
0\ 37 \\
-36 \\
\hline
0\ 18 \\
-18 \\
\hline
00
\end{array}
$$

$$
\begin{array}{r}
119 \\
6\overline{)714} \\
-6 \\
\hline
0\ 77 \\
-6 \\
\hline
54 \\
-54 \\
\hline
00
\end{array}
$$

8.
$$
\begin{array}{r}
0\ 177 \\
6\overline{)1{,}062} \\
-6 \\
\hline
46 \\
-42 \\
\hline
042 \\
-42 \\
\hline
00
\end{array}
$$

9.
$$
\begin{array}{r}
6\ 813 \\
1\overline{)6{,}813} \\
-6 \\
\hline
08 \\
-8 \\
\hline
01 \\
-1 \\
\hline
03 \\
-3 \\
\hline
0
\end{array}
$$

10.
$$
\begin{array}{r}
0\ 771 \\
6\overline{)4{,}626} \\
-42 \\
\hline
0\ 42 \\
-42 \\
\hline
0\ 0\ 6 \\
-6 \\
\hline
0
\end{array}
$$

Q2. Solve the following words problems:

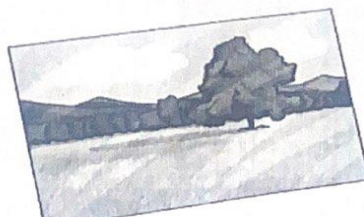a- A teacher asks some children to arrange 36 chairs into rows of nine chairs. How many rows will there be?

$36 \div 9 = 4$ rows

b- A photographer prints 96 photographs to arrange in an album. Each page will contain 8 photographs. How many pages will be used?

$$\begin{array}{r} 12 \\ 8\overline{)96} \\ -\ 8 \\ \hline 16 \\ -16 \\ \hline 00 \end{array}$$

12 pages

4

(i) 36 ÷ 5

$$7 \overline{\smash{)}\, 3\ 6} \quad \xrightarrow{\hspace{0.3cm}} \text{Quotient} = 5$$
$$-\ 3\ 5$$
$$1 \xrightarrow{\hspace{0.3cm}} \text{Remainder}$$

Divisor ⟵ 4) 75 ⟶ Dividend   Quotient = 18

$$-4$$
$$35$$
$$-32$$
$$\boxed{0\,3} \xrightarrow{\hspace{0.3cm}} \text{Remainder}$$

$$75 \div 4 = 18, \ R = 3$$

As a mixed number

$$18\frac{3}{4}$$

Q3. Calculate. Write the answer   As a mixed number

$$6 \overline{\smash{)}\, 8\ 5\ 9} \quad 1\ 4\ 3$$
$$-6$$
$$25$$
$$24$$
$$0\ 1\ 9$$
$$1\ 8$$
$$0\ 1$$

$$143\frac{1}{6}$$

$$8 \overline{\smash{)}\, 4\ 0\ 2} \quad 0\ 5\ 0$$
$$4\ 0$$
$$0\ 0\ 2$$

$$50\frac{2}{8}$$

$$6 \overline{\smash{)}\, 3\ 9\ 7} \quad 0\ 6\ 6$$
$$3\ 6$$
$$0\ 3\ 7$$
$$-3\ 6$$
$$0\ 1$$

$$66\frac{1}{6}$$

5

Problem 1

```
        0 3 3 4
   3 ) 1¹⁰0 0 4
        9
      0 0¹⁰0
      -   9
        0 1 4
        1 2
        0 2
```

$$334 \frac{2}{3}$$

Problem 2

```
        1 8 4
   4 ) 7 3 9
      - 4
        3 3
      - 3 2
        0 1 9
        - 1 6
          0 3
```

$$184 \frac{3}{4}$$

Problem 3

```
        0 5 2
   4 ) 2 0 9
      - 2 0
        0 0 9
        - 8
          1
```

$$52 \frac{1}{4}$$

Problem 4

```
        0 5 1 8
   5 ) 2 5 9 2
      - 2 5
        0 0 9
        - 5
          4 2
          4 0
          0 2
```

$$518 \frac{2}{5}$$

Problem 5

```
        1 1 5 8
   7 ) 8 1 0 9
        7
      0 1¹1
      -   7
        0³4¹⁰0
          3 5
        0 5 9
          5 6
          0 3
```

$$1158 \frac{3}{7}$$

Problem 6

```
        1 1 1 0
   8 ) 8 8 8 1
      - 8
        0 8
      - 8
        0 8
        - 8
          0 1
```

$$1110 \frac{1}{8}$$

Problem 1

```
        1977
   ┌─────────
 4 │ 7 9 0 8
   - 4
   ─────
     3 9
     3 6      10
     ────
     0 2̶ 8̶ 0̶
       2 8
     ─────
     0 2 8
     - 2 8
     ─────
       0 0
```

$$\boxed{1977}$$

Problem 2

```
        1 5 0 3
   ┌─────────
 3 │ 4 5 0 9
   - 3
   ───
     1 5
     1 5
   ─────
     0 0 0 9
       - 9
     ─────
         0
```

$$\boxed{1503}$$

Problem 3

```
        0 2 4 1
   ┌─────────
 5 │ 1 2 0 6
   - 1 0
   ─────
     0 2 0
     - 2 0
     ─────
     0 0 0 6
       - 5
     ─────
         1
```

$$\boxed{241\ \frac{1}{5}}$$

Problem 4

```
        0 4 9 5
   ┌─────────
 7 │ 3̶ 4̶ 6 6
       14
   - 2 8
   ─────
     0 6 6
       6 3
     ─────
     0 3 6
       3 5
     ─────
       0 1
```

$$\boxed{495\ \frac{1}{7}}$$

Problem 5

```
        0 5 5 6
   ┌─────────
 9 │ 5̶ 0̶ 0 9
     10
     4 5
   ─────
     4 5̶ 0̶
       10
       4 5
     ─────
       0 5 9
       - 5 4
     ─────
         0 5
```

$$\boxed{556\ \frac{5}{9}}$$

Problem 6

```
        0 5 6 7
   ┌─────────
 4 │ 2 2 6 8
   - 2 0
   ─────
     0 2 6
     - 2 4
     ─────
     0 2 8
     - 2 8
     ─────
       0 0
```

$$\boxed{567}$$

Homework

```
      0 4 9 8
  6 | 2 9 9 1
     -2 4
     _____
       5 9
       5 4
     _____
         5 1
         4 8
     _____
           3
```

$$4 \frac{3}{6}$$

```
       1 2 2 1
  8 | 9 7 7 5
     -8
     ____
       1 7
      -1 6
     _____
       0 1 7
        -1 6
     _____
        0 1 5  15
          -8
        _____
           7
```

$$1221 \frac{7}{8}$$

```
       0 7 3 3
  5 | 3 6 6 7
     3 5
     ____
     0 1 6
       1 5
     ____
     0 1 7
      -1 5
     ____
       0 2
```

$$733 \frac{2}{5}$$

```
       0 9 3 8
  6 | 5 6 3 0
     -5 4
     ____
     0 2 3  13
      -1 8
     ____
     0 5 0  10
         4 8
     ____
         0 2
```

$$938 \frac{2}{6}$$

```
       1 0 7 0
  9 | 9 6 3 4
     -9
     ____
     0 6 3
      -6 3
     ____
     0 0 4
```

$$1070 \frac{4}{9}$$

```
       2 1 9 5
  4 | 8 7 8 0
     -8
     ____
     0 7
     -4
     ____
       3 8
      -3 6
     ____
       0 2 0
        -2 0
     ____
         0 0
```

$$2195$$

4. Olivia took along four friends to a local farm to pick apples.

They picked 452 apples in all.

How many apples will each one get, if they decided to share them equally?

$$
\begin{array}{r}
09 \\
5\overline{)452} \\
-45 \\
\hline 002
\end{array}
$$

9 apples

Q5. Maher had 114 football cards.

He kept 10 cards and shared the rest evenly among his 8 friends.

How many football cards did each friend get?

step 1 :
$$
\begin{array}{r}
114 \\
-10 \\
\hline 104
\end{array}
$$
cards

$$
\begin{array}{r}
013 \\
8\overline{)104} \\
-8 \\
\hline 024 \\
-24 \\
\hline 00
\end{array}
$$

13 cards.

Q6. Marian baked cookies, and pastries one Saturday at home for her family and friends this holiday season.

a. She made 47 gingerbread cookies which she will distribute equally in tiny glass jars.

If she can put maximum six cookies in each jar.

How many cookies will not be placed in a jar?

$$
\begin{array}{r}
0\ 7 \\
6\overline{)47} \\
-42 \\
\hline
0\ 5
\end{array}
$$

5 cookies

b. Marian also baked pastries for her classmates.

If she can place 6 pastries on a tray at a time.

How many trays will she need to prepare 276 pastries at a time?

$$
\begin{array}{r}
0\ 46 \\
6\overline{)276} \\
-24 \\
\hline
0\ 36 \\
-36 \\
\hline
0\ 0
\end{array}
$$

46 trays

c. She also prepared 59 croissants for her 8 neighbors.

If each neighbor received an equal number of croissants.

How many will be left with Marian?

$$
\begin{array}{r}
0\;7 \\
8\overline{)59} \\
5\;6 \\
\hline
0\;3
\end{array}
$$

3 croissants

d. Lastly, she baked 53 lemon cupcakes for the children in the preschool nearby.

If she put in each box 3 cupcakes, how many boxes she used?

How many cupcakes are left at home?   2 cupcakes.   17 boxes

$$
\begin{array}{r}
1\;7 \\
3\overline{)5\;3} \\
3 \\
\hline
2\;3 \\
-2\;1 \\
\hline
0\;2
\end{array}
$$

END