Unit 2 : The Four Operations of Whole Numbers

Friendly Notes

Addition and Subtraction

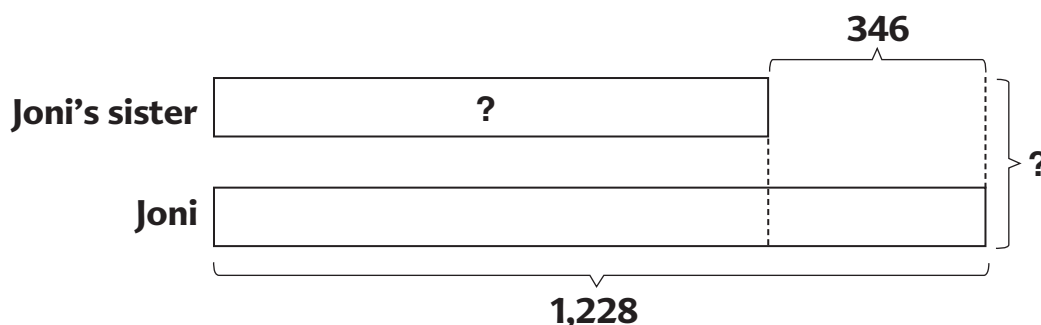When we add two or more numbers, we get their **sum**.
When we subtract two or more numbers, we find
their **difference**.
We can draw models to help us with addition and subtraction.

Joni has 1,228 seashells.
Her sister has 346 fewer seashells than Joni.

(a)   How many seashells does Joni's sister have?
(b)   How many seashells do they have altogether?

(a) $1,228 - 346 = 882$

   Joni's sister has 882 seashells.

(b) $1,228 + 882 = 2,110$

   They have 2,110 seashells altogether.

Multiplication and Division

When we multiply two or more numbers, we find their **product**. When a number is divided by another number exactly, the answer is the **quotient**. When a number is not exactly divided by another number, the answer is the quotient and the **remainder**.

We can multiply a 3-digit number by a 2-digit number as follows:

1. Find the product of 297 and 29.

$$
\begin{array}{r}
2\,9\,7 \\
\times\ \ \ 2\,9 \\
\hline
2,6\,7\,3 \\
5,9\,4\,0 \\
\hline
8,6\,1\,3 \\
\end{array}
$$

	200	90	7
20	200 × 20 = 4,000	90 × 20 = 1,800	7 × 20 = 140
9	200 × 9 = 1,800	90 × 9 = 810	7 × 9 = 63

$$
\begin{array}{r}
4,000 \\
1,800 \\
140 \\
1,800 \\
810 \\
+\ \ \ \ 63 \\
\hline
8,613 \\
\end{array}
$$

$$297 \times 29 = 297 \times 30 - 297$$
$$297 \times 30 = 8,910$$
$$8,910 - 297 = 8,613$$
$$297 \times 29 = 8,613$$

We can divide a 4-digit number by another number as follows:

2. Find the value of 3,468 ÷ 6.

$$
\begin{array}{r}
5\ 7\ 8 \quad \longleftarrow \text{quotient} \\
6\,\overline{)\,3,4\ 6\ 8} \\
3\ 0 \quad \longleftarrow 5 \times 6 \\
\hline
4\ 6 \\
4\ 2 \quad \longleftarrow 7 \times 6 \\
\hline
4\ 8 \\
4\ 8 \quad \longleftarrow 8 \times 6 \\
\hline
0 \\
\end{array}
$$

		3,468
500	3,000	− 3,000
70	420	468
		− 420
8	48	48
		− 48
		0