

Long Division

$$\begin{array}{r} \text{th h t o} \\ \overline{6 \overline{) 8118}} \\ \underline{-6} \\ 2 \end{array}$$

$$\begin{array}{r} \text{th h t o} \\ \overline{6 \overline{) 8118}} \\ \underline{-6} \\ 21 \\ \underline{-18} \\ 3 \end{array}$$

$$\begin{array}{r} \text{th h t o} \\ \overline{6 \overline{) 8118}} \\ \underline{-6} \\ 21 \\ \underline{-18} \\ 31 \\ \underline{-30} \\ 1 \end{array}$$

$$\begin{array}{r} \text{th h t o} \\ \overline{6 \overline{) 8118}} \\ \underline{-6} \\ 21 \\ \underline{-18} \\ 31 \\ \underline{-30} \\ 18 \\ \underline{-18} \\ 0 \end{array}$$

Check:

$$\begin{array}{r} 1353 \\ \times 6 \\ \hline \end{array}$$

Review the steps of long division with this example.

If the divisor does not “go into” the thousands digit, then combine the thousands with the hundreds, and in effect look at the **first two digits**.

You can place a zero in the quotient in the thousands place.

Complete the division on the right. Then check your answer by multiplying.

$$\begin{array}{r} \text{th h t o} \\ \overline{7 \overline{) 2058}} \\ \underline{-14} \end{array}$$

Check:

Look carefully at this example, where we get a zero in the quotient.

You can handle this situation in two different ways.

- 1) Either multiply & subtract as normal; OR
- 2) Combine that digit with the next digit in the dividend, and then divide the divisor into the “number” formed by the two digits.

Complete the divisions on the right.

- 1) 3 goes into 1 zero times. Multiply and subtract normally. In the next step, you divide 3 into 16.
- 2) Another way: since 3 goes into 1 zero times, look at the two digits “16”. Place “05” in the quotient.

$$\begin{array}{r} \overline{3 \overline{) 6168}} \\ \underline{-0} \\ 16 \end{array}$$

$$\begin{array}{r} \overline{3 \overline{) 6168}} \\ \underline{-15} \\ 1 \end{array}$$

1. Divide. Check each division result with multiplication.

a.

$$\begin{array}{r} 6 \overline{)4134} \\ \hline \end{array}$$

b.

$$\begin{array}{r} 9 \overline{)3933} \\ \hline \end{array}$$

c.

$$\begin{array}{r} 6 \overline{)3282} \\ \hline \end{array}$$

d.

$$\begin{array}{r} 7 \overline{)7546} \\ \hline \end{array}$$

e.

$$\begin{array}{r} 3 \overline{)7218} \\ \hline \end{array}$$

f.

$$\begin{array}{r} 4 \overline{)7632} \\ \hline \end{array}$$

2. Michael puts one-sixth of his weekly \$516 salary into savings.

- How much does he put into savings?
- How much is left?