1 1 1 ← carries Scratchpad  
1 4 7 6 6 6  
+ 3 5 5 4 + 4  
5 2 5 2 sum 
$$\frac{+ 4}{(10)_{10}} = (12)$$

$$\frac{+3554}{5252} \text{ sum} \qquad \frac{+4}{(10)_{10}} = (10)_{10$$

$$\frac{6}{(10)_{10}} = (12)_{8}$$

$$\frac{1}{+7} + \frac{5}{(13)_{10}} = (15)_{8}$$

$$\frac{1}{(13)_{10}} = (15)_8$$

$$+ 4$$

$$\begin{array}{c}
1 \\
+ 4 \\
+ 5 \\
\hline{(10)}_{10} = (12)_{8} \\
1 \\
+ 1 \\
+ 3 \\
\hline{(5)}_{10} = (5)_{8}
\end{array}$$

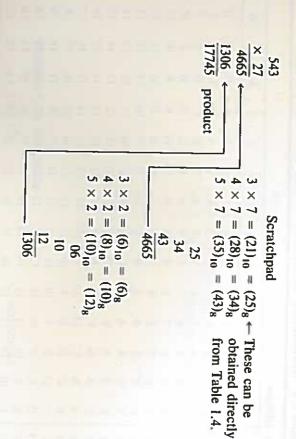
## Example 1.23: Subtraction

4 14 Digit position 2 required a 
$$\frac{5}{4}$$
 7 5 borrow from position 3  $\frac{-3}{15}$  6 4  $\frac{15}{11}$  11 12 12  $\frac{-7}{5_8}$   $\frac{-7}{5_8}$  5 5 5

## Example 1.24: Subtraction

The intermediate 0s become r - 1 or 7 when borrowed.

## Example 1.25: Multiplication



Example 1.26: Division

Use the multiplication table in Table 1.4 to derive the quotient digit (by trial and error).

## 1.4.3 Hexadecimal Arithmetic

examples illustrate hexadecimal arithmetic. Table 1.5 shows the addition and multiplication tables. The following