§ **2.** If the coefficients, and also the values of x, are small numbers, much of the above may be done mentally, and the work will then be very compact. Thus, performing mentally the multiplications and additions (or subtractions) of the coefficients, and merely recording the partial reductions r_1, r_2, r_3, and the result r_4, the last example will appear as follows:

$$
\begin{array}{rrrrrr}
-5) & 2 & +12 & +6 & -12 & +10 \\
 & 2 & & & & \\
 & -4 & & & & \\
 & 8 & & & & \\
 & -30 & & & &
\end{array}
$$

§ **3.** In the above examples, the coefficients are "brought down" and written below the products p_1, p_2, p_3, p_4, and are added or subtracted, as the case may require, to get the partial reductions r_1, r_2, r_3, and the result r_4. Instead of thus "bringing down" the coefficients, we may "carry up" the products p_1, p_2, p_3, p_4, writing them beneath their corresponding coefficients, and thus get r_1, r_2, r_3, r_4, in a third (horizontal) line. Arranged in this way, Exam. 2 will appear

$$
\begin{array}{r|rrrrr}
 & 1 & -1 & -4 & -3 & -5 \\
3 & & +3 & +6 & +6 & +9 \\
\hline
 & 1 & +2 & +2 & +3; & 4
\end{array}
$$

and Exam. 3 will appear

$$
\begin{array}{r|rrrrr}
 & 2 & +12 & +6 & -12 & +10 \\
-5 & & -10 & -10 & +20 & -40 \\
\hline
 & 2 & +2 & -4 & +8; & -30
\end{array}
$$

Comparing these arrangements with those first given (Exams. 2 and 3), it will be seen that they are, figure for figure, the same, except that the multiplier is not repeated.