

§182. Synthetic Division:

a. In a synthetic division arrangement, the numeric symbols in the synthetic dividend, synthetic product, and synthetic quotient must be aligned by place value. Symbols of operation, when present, must also be aligned. There must be at least one column of blank cells between adjacent columns of a synthetic division arrangement.

b. A vertical line must be used to the left or to the right of the synthetic division arrangement according as the synthetic divisor appears to the left or to the right. This vertical line must be unspaced from the synthetic dividend and from the synthetic divisor. One part of the vertical bar must appear on the line containing the synthetic dividend, and another part of the line must appear on the line containing the synthetic product. The separation line must begin directly under the vertical line at one end, and terminate one cell beyond the over-all synthetic arrangement at the other end. If the synthetic divisor appears in ink print as boxed-in on two sides, this must be ignored in the transcription. When a vertical line is used between the synthetic quotient and the synthetic remainder, it must be placed in the column of blank cells as shown in ink print.

$$\begin{array}{r|rrr}
 2 & 1 & -3 & 2 \\
 & & 2 & -2 \\
 \hline
 & 1 & -1 & 0
 \end{array}$$

(2)
$$\begin{array}{r|rr} 1 & -3 & 2 \\ & 2 & -2 \\ \hline 1 & -1 & 0 \end{array} \quad 2$$

(3)
$$\begin{array}{r|rrrr} +2 & 1 & +6 & -1 & -30 \\ & +2 & +16 & +30 \\ \hline 1 & +8 & +15 & +0 \end{array}$$

(in ink print, the divisor is boxed-in on two sides; there is no vertical line after the divisor)

(4)
$$\begin{array}{r|rrrr} 1 & -3 & +4 & +5 \\ & +2 & -2 & +4 \\ \hline 1 & -1 & +2 & +9 \end{array} \quad \boxed{+2}$$

(in ink print, the divisor is boxed-in on two sides; there is no vertical line after the divisor)