

Short Cuts (continued)

Rule 6. - To Multiply by Multiples of 11 as 33, 44 etc. use just one of the two figures as a multiplier and group the figures in multiplicand as in multiplying by 11

Ex. $\begin{array}{r} 2604580 \\ \times 33 \\ \hline 78137440 \end{array}$ The small figures show the grouping and are the numbers that are multiplied by 3 for the answer

Rule 7. - To Multiply with any number from 10 to 20, multiply with the units figure only, and besides adding the carrying number, add in the figure to the right.

Ex. $\begin{array}{r} 4365 \\ \times 6 \\ \hline 26190 \end{array}$ Work. - 6 times 5 = 30, put down the 0; 6 times 6, + 3 (carrying no) + 5 = 44, put down 4; 6 times 3 + 4 + 6 = 28 put down 8; 6 times 4 + 2 = 29, put down 9 and add the carrying no; 2 and the 4 making the last figure 6.

By working this question the long way you may easily see the reason for adding the figure to the right.

One who knows the tables up to 19×9 may not have any use for this rule.

Rule 8. - To Multiply by 21, 31 etc up to 91, use the tens figure as multiplier and add from the left, after beginning with the product of the units figures

Ex. - $\begin{array}{r} 6745 \\ \times 21 \\ \hline 14155 \end{array}$ Work. - 1st 1 times 5 = 5; then use 6 as multiplier. 6 times 5 + 4 = 34; then 6 x 4 + 3 and 7; next 6 x 7 + 3 and 6; lastly 6 x 6 + 5, making 41445.

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