

PSC NO: 3 TELEPHONE
ALLTEL New York, Inc.
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SECTION 12 - INTRALATA TOLL MESSAGE TELECOMMUNICATIONS SERVICE

C. BASIS FOR ESTABLISHING RATES (Continued)

3. Determination of Air Line Mileages (Continued)

b. Example calculation.

The message rate distance is required between Fulton, New York and Munnsville, New York.

		<u>V</u>	<u>H</u>
Step (1)	Fulton Coordinates	4774	2059
	Munnsville Coordinates	<u>4758</u>	<u>1908</u>
Step (2)	Difference	16	151
Step (3)	Dividing each difference by three and rounding to nearer integer = 5 and 50		
Step (4)	Squaring integers and adding,	$\begin{array}{r} 5 \times 5 = 25 \\ 50 \times 50 = \underline{2500} \\ \hline 2525 \end{array}$	
	Sum of squared integers	2525	

Note that the sum of integers is greater than 1777 so a) divide integers in Step (3) by three and b) repeat Step (4):

a) Dividing integers in 3. by three and rounding = 2 and 17.

b) Squaring integers and adding

$$\begin{array}{r} 2 \times 2 = 4 \\ 17 \times 17 = \underline{289} \\ \hline \end{array}$$

Sum of squared integers 293

Step (5) The sum of the squared integers is less than 1778 and was obtained after two successive divisions by three; therefore "N" = 2.

Multiply final sum of squared integers by factor of 8.1 (corresponding to "N" = 2).

$$\begin{array}{r} 293 \\ \times 8.1 \\ \hline 2373.3 \end{array}$$

Step (6) Square root of 2373.3 = 48.72 which is rounded to 49 miles (fractional miles being considered full miles). The 49 miles is larger than the minimum of 41 rate miles applicable when "N" = 2 so the message rate mileage is 49 miles.

Issued by: Vice President, State Government Affairs, Little Rock, Arkansas