

Contacts vs. Multipliers

Or, "Via Which Way Do the Points Pay?"

BY ELLEN WHITE, WIYYM

SHOULD all the contest post-mortem "ifs" be laid end to end, they just might reach from here to the Moroccan City of (where else?) Ifni. Let's face it! Sooner or later almost every contest operator wonders if it paid off chasing an elusive VES for an additional section multiplier during the Sweepstakes or that rare prefix during the annual DX Competition. But would it pay off? How would our over-all score be influenced by one more multiplier at the expense of other contacts?

The aftermath of the '54 Sweepstakes renewed a familiar phase of this "if" business. Amid a pile of scrap paper, pencil shavings, impossible graphs, fingernail remnants and the like, good old fashioned algebra reared its neglected head and came to the rescue. Stock phrases were still emanating from the hamshack (you know the kind — "Boy, if I'd just snagged North Dakota, Feverish Phil would have had it" . . . "15 more QSOs and ol' Regenerative Rod would have cried Uncle!" . . .) when our score variables fell into a very elementary formula.

In the scoring of almost every contest, just two variables are present: the number of contacts and the multiplier (whether it be sections or countries). At any point in such an affair we can find out in a snappy fashion just how many contacts (represented by the letter Z) would be required to give us the same score that one more multiplier would give us. For instance, let X equal the number of contacts at any time, and Y the number of sections (or countries) (Fig. 1). If we increased our number of QSOs by some amount equal to Z (without gaining an additional multiplier), we could say our score would be

$$= (X + Z) Y$$

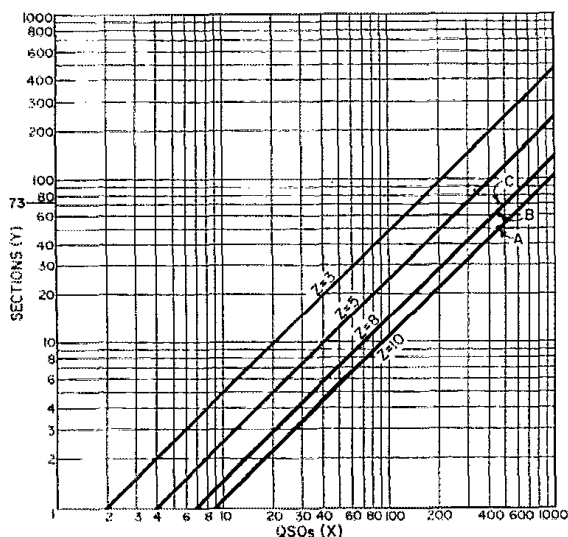


Fig. 1.

However, if we worked one more station and it happened to be a new multiplier, our score would be

$$= (X + 1) (Y + 1)$$

You'll note to increase our multiplier by 1, we had to work another station, hence the addition to both X and Y.

The stock high school phrase "things equal to the same thing are equal to each other" serves in good stead about now. If we set the above two formulas equal to each other and solve for Z (that unknown number of QSOs), we come up with

$$Z = \frac{X + Y + 1}{Y}$$

For instance, if you have 120 QSOs and 28 sections and are wondering about chasing sections or just racking up contacts, how many contacts would you actually have to work to give you the same point total that one new section brings with it? Let's see:

$$Z = \frac{120 + 28 + 1}{28} = \text{approximately } 3 \text{ QSOs.}$$

However, if we had 360 QSOs and 52 sections, what then?

$$Z = \frac{360 + 52 + 1}{52} = \text{approximately } 8 \text{ QSOs.}$$

You've undoubtedly noted that our formula is actually the sum of three fractions:

$$\frac{X}{Y} + \frac{Y}{Y} + \frac{1}{Y}$$

This gives us somewhat of a short-cut to hurry-up approximations. For all scores where the multiplier is five or more, we can discard the term $\frac{1}{Y}$; note that $\frac{Y}{Y}$ is equivalent to 1; all of which now means we can divide $\frac{X}{Y}$ and add the numeral 1 to that figure for our term Z. So:

$$\frac{X}{Y} + 1 = Z$$

Let's use an example based on the results of the '54 SS. W6CHV, San Diego Section, tallied 69,300 points on 350 QSOs in 66 sections. Our quick-check formula tells us how many contacts W6CHV would have had to make to give him the same final score a 67-section multiplier offers:

$$\frac{350}{66} + 1 = 6$$

This problem, academic to some, but practical to others, becomes intensified when some of the big boys debate the merits of that 73rd section against the "let nature take its course" school

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of thought. What if W1JYH (Western Mass.) applied the formula to his '54 SS results, 119,340 points on 663 QSOs in 72 sections:

$$\frac{663}{72} + 1 = 10$$

Could be it's rougher to get 10 new contacts late in the SS than to spend a half hour chasing that golden 73rd!

A brief glance at the illustration will give you an idea how the ratio changes. At the point marked A, 460 QSOs, 50 sections, it takes 10 QSOs to equal (in points) what 461 QSOs and 51 sections would bring. At the point B, 460 QSOs, 60 sections, it would take about 9 contacts to achieve the score made with 461 QSOs in 61 sections. At point C, 460 QSOs, 70 sections, approximately 8 give the same point total as 461 QSOs in 71 sections.

Oh, well, there must be more complicated ways to pursue this perennial problem, but for now anyway I'll settle for QSOs divided by sections plus 1 and let the "ifs" fall where they may!

YL News and Views

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in the Capital. . . . W3TSC, Camille, worked all but five states for her WAS on 7046 kc, with no prearranged skeds. . . . W8QOM, Anna, believes she is the first person to work all 83 Michigan counties on 'phone (75) in less than a year. . . . At the second annual picnic of the Northwest YL Operators Network, in Ellensburg, Wash., the members present, W7s FWR, QYN, SYF, ULK, WMS, and YAR, decided to rotate as NCS each month for experience. . . . KZ5AE, Sis, is keeping her new rig, 150 watts to a single 813, busy on 10, 15, and 20. . . . Proof of confirmation for the "Lads 'n Lassies" certificate, issued by the Los Angeles YLRC, should go to the new "Queen of the Clan," Helene J. Leonard, W6QOG, 1205 S. Edris Drive, Los Angeles 35.

Decision by Default

Young Lady, eX Young Lady, Married Young Lady, Single Young Lady, Lady Ham, Mother Ham, Hamette, Hamess, Lady Amateur, Lady Operator, Single Lady Operator, Married Lady Operator, Old Girl — take your pick, milady. These are some suggestions offered in our running discussion of what to label women amateur radio operators and women who don't have their tickets, too. In July '53 the possibility of supplanting the popular but often confusing YL and XYL terms was first broached, with additional notes in our Sept., Oct., Nov. '53 and Jan. '55 columns. Comments have been aired, with the majority emitting conspicuously from the OMs. We weren't exactly "snowed" with pleas for a complete change, though, so we are moved by lack of feminine opinion to retain the status quo. YLs and XYLs we remain, for a while at least. (Now watch the mail bag strain with cards of protest!)

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