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THE POWER OF FITS

We can easily determine what our minimum fit is based on what we learn from the auction and the opponents.

Hypothesis:

When they have a fit, we have a fit.

Rule #1

When the opponents have an eight card fit our minimum fit is 7.

This rule is proven in the following manner:

The opponents have the following auction:

1S P 2S ?

The opponents have a minimum fit of 8 Spades. That leaves no more than 5 Spades for us. Since each of our hands has 13 cards for a total of 26 cards for the partnership, and we – as a partnership – hold no more than 5 Spades, 21 of our cards must be Hearts, Diamonds and Clubs, the 3 remaining suits. When we divide 21 by 3, the product is 7 – the number of cards that we could have as a partnership in each suit.

If you held Ax Axxx Kxxxx xx, the only instance in which your partnership would not have an 8 card fit is when your partner held 3S 3H 2D 5C.

This is represented in the following equation:

26 – (13 – their minimum fit)/3 = our minimum fit.

26: the total cards held by the partnership.
(13 – their minimum fit): the minimum number of cards held by the opponents in their suit.
3: the number of the suits remaining.

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Rule #2

If the opponents have a nine card fit, we must have at least one eight card or longer fit.

1S P 3S ?

In this auction the opponents typically have 9 or more Spades.
Using the *fit formula* we can determine the following:

$$26 - (13 - 9)/3 = 7.333$$

26: the total cards held by the partnership
(13 – 9): their minimum fit subtracted from 13 (the total number of Spades)
3: the total number of suits remaining.

Since cards are always whole numbers (you cannot have 1/3 of a heart for example) we must have at least one 8 card fit.

An alternative way of expressing this rule follows:

Rule #2A

Whenever the partnership has fewer than 5 cards in any given suit, we must have at least one 8 card fit.

By the use of this formula we can also determine the following minimum fits:

When the opponents have a 10 card fit:

26 – (13-10)/3 = 7.666. One 9+ fit, or two 8 card fits.

When the opponents have an 11 card fit:

26 – (13-11)/3 = 8. One 10+ fit, exactly one 9 AND one 8 card fit, or three 8 card fits.

When the opponents have a 12 card fit:

26 – (13-12)/1 = 8.333. One 11+ fit or exactly one 10 AND one 8+ card fit, or two 9 card fits.

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When the opponents have a 13 card fit:

26 – (13-13)/3 = 8.666 one 12+ fit or exactly one 11 AND one 8+ card fit, or exactly one 10 AND one 9 card fit, or one 10 AND two 8 card fits, or exactly two 9 AND one 8 card fits.