

MEMORANDUM

TO: Chief Justice of the Trial Court, Paula M. Carey
Chief Justice of the Probate and Family Court, Angela M. Ordoñez

FROM: Mark Sarro

SUBJ: 2017 Child Support Guidelines Worksheet

DATE: March 23, 2018

The Administrative Office of the Probate and Family Court asked me to review and comment on three computational issues in the 2017 Child Support Guidelines (“guidelines”) and the Guidelines Worksheet (“worksheet”) effective September 15, 2017.¹ Specifically, I was asked to consider:

- The adjustment factors for children age 18 years or older in Table B of the worksheet;
- The proper use of the worksheet to adjust for child care and health care costs in cases of shared or split parenting;² and
- The coding in lines 4(f) and 4(g) of the Trial Court’s interactive (online) worksheet.

These three issues are unrelated and are not purely economic issues. The first issue is a policy question with practical implications for how the adjustment factors in the current Table B for children age 18 years or older are calculated. The second and third issues are entirely mechanical, relating to how the worksheet actually works. This memo briefly summarizes each issue and proposes possible amendments to the guidelines text and worksheet to address them.

1. Table B Adjustment Factors

Table B of the worksheet takes the child support amounts from Table A for one child and adjusts them upward in cases with more than one child. Prior to the 2017 guidelines, Table B listed five adjustment factors to be applied to the Table A amounts: an adjustment factor of 1.00 for one child, 1.25 for two children, 1.38 for three children, 1.45 for four children and 1.48 for five

¹ R. Mark Rogers contributed to the initial draft of this memo.

² “Shared” parenting means both parents have approximately equal financial responsibility and parenting time for all of the children covered by a child support order. “Split” parenting means each parent provides a primary residence for at least one of the children covered by an order.

children. These adjustment factors increase at a decreasing rate. They represent increases in the combined support amount of 25 percent, 10 percent, 5 percent and 2 percent, respectively, for each additional child after the first child covered by an order.³ As I reported to the 2016-2017 Task Force, these incremental increases seem low in economic terms because the child support amounts for the first child from Table A to which they apply are relatively high.⁴

Table B of the 2017 guidelines uses exactly the same four adjustment factors for additional children under age 18 (1.00, 1.25, 1.38 and 1.45).⁵ However, the 2017 guidelines expand Table B to also include discounted adjustment factors for orders covering children age 18 years or older.⁶ Specifically, the guidelines and worksheet were amended to “account for the age factor by reducing the amount of child support for children age 18 or older by 25 percent.”⁷

The new adjustment factors in the current Table B are calculated on an *equally proportional* basis, meaning the 25 percent discount is applied in proportion to the overall number of children under 18 and 18 or older covered by an order. For example:

- The adjustment factor for two children, one of whom is 18 or older, is 1.09. This value is derived by applying 1/2 of the 25 percent discount (or 12.5 percent) to the two-child adjustment factor for children under age 18 (1.25), since only one of the two children is 18 or older. That is, $1.25 \times (1 - 0.125) = 1.09$.
- The adjustment factor for three children, one of whom is 18 or older, is 1.27. This value was derived by applying 1/3 of the 25 percent discount (or 8.3 percent) to the three-child adjustment factor for children under age 18 (1.38), since only one out of the three children is 18 or older. That is, $1.38 \times (1 - 0.083) = 1.27$.

All of the other adjustment factors in the current Table B are calculated in the same way: by applying the 25 percent discount in equal proportion to the number of children 18 or older covered by an order.

³ These percentages are calculated for each adjustment factor relative to the adjustment factor for one fewer child. For example, the increase from 1.00 for one child to 1.25 for two children is a 25 percent increase: $(1.25/1.00) - 1 = 0.25$. Similarly, the increase from 1.25 to 1.38 for a third child is 10 percent: $(1.38/1.25) - 1 = 0.10$, and so on.

⁴ Mark Sarro and R. Mark Rogers, “Economic Review of the Massachusetts Child Support Guidelines, 2016-2017,” June 23, 2017, pp. 14-18.

⁵ These same adjustment factors now appear in the first column in Table B of the 2017 guidelines.

⁶ By statute, the Court has discretion either to order or to decline to order child support for children age 18 or older. If the Court exercises its discretion to order child support for children age 18 or older, the guidelines formula reduces the amount of child support in accordance with Table B of the worksheet.

⁷ “Report of the Task Force for the 2016-2017 Quadrennial Review of the Massachusetts Child Support Guidelines,” June 2017, p. 4. See also 2017 Guidelines, Commentary II(F), p. 16.

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An advantage of applying the 25 percent discount based on the proportion of children 18 or older is that it does not require any assumption about the age order of the children. This approach places equal weight on each child in a case. This has the benefit of reflecting the economic reality of shared costs among all children covered by an order. It also results in predictable impacts relative to child support amounts for a given combined income level with the same number of children all under age 18. For example, where one out of two children is 18 or older, the current Table B applies 1/2 of the 25 percent discount (12.5 percent). It applies 1/3 of the discount (8.3 percent) in cases with one out of three children 18 or older; 2/3 of the discount (16.7 percent) in cases with two out of three children 18 or older; 3/4 of the discount (18.8 percent) in cases with three out of four children 18 or older, and so on for any age combination.

Applying the age discount on an *equally proportional* basis means only the percentage of children 18 or older matters, not the fact that they are actually the first and oldest children covered by an order. The current Table B does not apply the 25 percent discount to the oldest children first or last. This distinction is important, because the order in which the discount is applied makes a difference in the resulting adjustment factors calculated under different approaches. By calculating the adjustment factors on an *equally proportional* basis, the current Table B is a middle approach between two alternatives: considering the *oldest children first* or considering the *oldest children last*.

However, because the magnitude of the discount for children 18 or older under the guidelines (25 percent) is larger than any of the increases for additional children in the current Table B after the second child (10 percent, 5 percent and 2 percent, respectively), it is possible for an equally proportional discount to more than offset those increases. This happens because the discount for older children is larger than the incremental increase for additional younger children, and the presence of children 18 or older gives the children under 18 less weight in the calculation. This happens five times in the current Table B: in cases of four or five children at least one of whom is 18 or older. In those five instances, the adjustment factors in Table B decrease relative to cases with one fewer child under age 18.

For example, consider a case with four children, one of whom is 18 or older. The decrease for the oldest child on an *equally proportional* basis is 1/4 of 25 percent, or 6.25 percent. But this discount exceeds the 5 percent incremental increase implicit in Table B for a fourth child.⁸ The difference reflects the oldest child's portion of shared costs within the household, while the 5 percent represents only the marginal cost of adding a fourth child to the order. Because the discount in the current Table B is being applied to average cost rather than marginal cost, it more than offsets the 5 percent increase. As a result, the adjustment factor for four children with one child 18 or older (1.36) is smaller than the adjustment for three children all under 18 (1.38). This

⁸ In this example, the increase in the relevant adjustment factors in the first column of Table B (1.38 and 1.45) is 5 percent.

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means, for a given level of combined available income, a support order with a fourth child 18 or over will be lower than an order for three children under 18. That outcome is not “wrong” as a matter of economics, but it is counterintuitive from a policy perspective.

If the Trial Court would like to avoid that outcome, it could use a different approach to calculate the adjustment factors in Table B. Rather than applying the 25 percent discount on an *equally proportional* basis, it could apply the discount to the oldest children first or to the oldest children last. Either alternative would yield a different set of adjustment factors:

- Applying the 25 percent discount to the *oldest children first* (since they literally were the first children in a given household) would result in lower adjustment factors (and therefore lower child support amounts) than the equally proportional factors in the current Table B. This is because the adjustment factors for all children covered by an order would be calculated from a starting point that is 25 percent lower for the first child, who is 18 or older. The adjustment factor for that child would be 0.75 rather than 1.00. So for a second child (under 18), the adjustment factor would be $0.75 \times (1+0.25) = 0.94$. But this is lower than the adjustment factor of 1.00 for one child under 18. This is the same counterintuitive outcome previously described in the current Table B. It would occur in four of the 20 possible age combinations in Table B if the discount were applied to the oldest children first. Therefore, that approach is not an option if the Trial Court wants to avoid this outcome.
- Applying the 25 percent discount to the *oldest children last* (to preserve the full support amount for children under 18 covered by an order) would result in higher adjustment factors (and therefore higher child support amounts) than the equally proportional factors in the current Table B. This is because the 25 percent discount would be applied only to the relatively small incremental increases for an additional child (25 percent, 10 percent, 5 percent and 2 percent, respectively), rather than to the average cost of each child 18 or older.⁹ The adjustment factor would be 1.00 for a first child under 18. For a second child 18 or older, the 25 percent discount would be applied only to the 25 percent increase for a second child. So the adjustment factor would be $1.00 \times (0.25 \times 0.75) = 1.19$. For more children age 18 or older, the adjustment factors would be calculated in the same way.

Relative to the 1.25 adjustment factor for two children under 18, this implies an effective discount of just 5 percent (1.19 relative to 1.25). This is significantly less than the 25 percent discount stated in the guidelines because only the incremental cost of the child 18 or older is being discounted, not that child’s (50 percent) proportional share of the overall child support amount. The same result holds for all other combinations of children under 18 and 18 or older.

⁹ In effect, this approach treats children age 18 or older as if they are the last children added to the order, despite the fact that they are actually the first and oldest children.

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The effective discounts from considering the *oldest children last* are small relative to the 25 percent discount stated in the guidelines, ranging from just 1 percent to 9 percent. However, they are uniformly increasing over all possible combinations of additional children, by design. This avoids the counterintuitive possibility of the age adjustment more than fully offsetting increases in child support as children are added to an order. The effective discounts for children age 18 or older would be lower than under the current guidelines, so the resulting child support amounts would be higher. But they would always increase as children are added to an order.

If the Trial Court wants to entirely eliminate support orders decreasing when a fourth or fifth child age 18 or older is added, it could amend the current Table B by recalculating the adjustment factors based on applying the 25 percent discount to the *oldest children last*. Again, this would only apply the discount to the incremental increases in support for an additional child, which would mute much of the current impact of the stated 25 percent discount throughout Table B. However, it also would assure that the adjustment factors in Table B uniformly increase as children are added to an order because it discounts 25 percent of the increase only, not of the overall order, for any age combination in the table.

For more clarity on the interaction between the adjustments for the number and ages of children, the Trial Court also could separate these adjustments into two separate effects. The worksheet could include two tables: one table to adjust for the number of children and a second table to adjust for their ages. For example, Table B could be the same as in the 2013 guidelines, listing only the adjustment factors in the first column of the current Table B:

TABLE B: ADJUSTMENT FOR NUMBER OF CHILDREN	
NUMBER OF CHILDREN	ADJUSTMENT FACTOR
0	0.00
1	1.00
2	1.25
3	1.38
4	1.45
5	1.48

Then, a new Table C could be added to list the discounts for children age 18 or older. If the Trial Court decides to apply the 25 percent discount to the *oldest children last* rather than in equal proportion, the new Table C would be:¹⁰

¹⁰ The percentages in Table C are calculated as previously described, applying the 25 percent discount to only the incremental increases in support for an additional child age 18 or over. Consistent with the rest of the worksheet, the resulting discounts are rounded to the nearest percentage.

CHILDREN UNDER 18	CHILDREN 18 OR OLDER					
0	1	2	3	4	5	
0	0%	25%	25%	25%	25%	25%
1	0%	5%	8%	9%	9%	
2	0%	3%	4%	4%		
3	0%	1%	2%			
4	0%	1%				
5	0%					

The combined adjustments in these two tables are the same as in the current Table B for cases with either all children under 18 or all children 18 or over (the first row and first column of Table C). The adjustment factors reflect the full 25 percent age discount when all children are 18 or older (the first row), or no discount when all children are under 18 (the first column). This means the corresponding child support amounts would be the same as they are under the current guidelines. However, the alternative discounts in the rest of Table C above are smaller than the discounts in the current Table B by approximately 5 percent to 14 percent.¹¹ This means the corresponding child support amounts would be higher than under the current guidelines by roughly 5 to 14 percent in those cases, before adjusting for child care and health care costs.

Importantly, the current (equally proportional) age adjustment factors in Table B of the 2017 guidelines are not “wrong,” nor are the alternative (oldest children last) adjustment factors in the above Table C objectively “right.” Each approach has theoretical and practical advantages and drawbacks. However, if the Trial Court wants to avoid the counterintuitive outcomes summarized above, applying age discounts such as in Table C would do that. Economics can inform that decision, but ultimately this is a policy decision, just as the adjustment factors for the number of children (25 percent, 10 percent, 5 percent and 2 percent) and the 25 percent discount for children age 18 or older, are policy decisions informed by economic data and principles.¹²

2. Shared and Split Financial Responsibility and Parenting Time

As in prior guidelines, the 2017 guidelines include an instruction for how to use the worksheet to calculate a net support order in shared and split parenting cases. That instruction states:

¹¹ The effective discounts are smallest when there are fewer children age 18 or older relative to the number of children under age 18 (such as four children under 18 and one child age 18 or older). The effective discounts are largest when there are relatively more children age 18 or older.

¹² For example, the Trial Court may not think the (lower) effective discounts of 1 percent to 9 percent sufficiently reflect the nominal 25 percent age adjustment, or may not think it would be appropriate for some child support amounts to increase by 5 percent to 14 percent. If so, it could adopt alternative adjustments, based on its discretion and/or on its sense of the intent of the 2016-2017 Task Force.

“...the child support order shall be determined by calculating the guidelines worksheet twice, first with one parent as the recipient, and second with the other parent as the recipient. ...The difference in the calculations shall be paid to the parent with the lower weekly support amount.”¹³

The substance of this instruction did not change in 2017. It is the same guidance given in prior guidelines for calculating net support orders when child costs and parenting time are shared approximately equally or are split.

However, there are two mechanical issues with this instruction as written:

First, it is potentially confusing to say the difference in the calculations shall be paid to the parent “with the lower weekly support amount.” Inherently, the guidelines formula will yield a lower weekly support amount when the worksheet is run with the higher-income parent as the recipient and the lower-income parent as the payor. But it would be counterintuitive for a lower-income parent to pay child support to a higher-income parent if they share or split child costs and parenting time. The intent of the instruction is for the parent with the lower amount of available income (not the lower weekly support amount) to be paid the difference in support calculated by running the worksheet twice and netting the results. The idea is to run the guidelines twice, subtract the lower support amount from the higher support amount, and have the person with more available income pay the difference to the other parent.

Second, in shared or split parenting cases the new child care and health care cost credit in Section 4 of the 2017 guidelines should be run only once, not twice. This cost credit adjusts the payor’s final support amount based on sharing reasonable child care and health care costs in proportion to the parents’ relative available incomes. The resulting net credit is capped at 15 percent of the payor’s share of support (in line 3(f) of the worksheet) before applying the credit. Applying the cost credit in the worksheet involves two steps: first, each parent deducts his or her out-of-pocket costs from gross income in Section 2 of the worksheet; second, the total out-of-pocket costs of both parents are shared in proportion to their available incomes and the net difference is applied to the support order in Section 4 of the worksheet.

The cost credit is intended to be applied only one time and in the same way in all cases, including shared or split parenting cases. Even though the worksheet is run twice in such cases, Section 4 of the worksheet already calculates the *net* cost credit. Therefore, the current worksheet in shared or split parenting cases should be run twice to calculate the difference in the basic support amounts in line 3(f), and then the credit should be applied to that difference only once, in favor of the parent with higher proportional share of out-of-pocket costs.¹⁴

¹³ 2017 Guidelines, Section II(D), pp. 9-10 at paras. 3 and 5.

¹⁴ If the combination of income and out-of-pocket costs is such that the payor has a higher proportional share of both parents’ costs, the net support amount is reduced by up to 15 percent, and vice versa.

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If the Trial Court wants to clarify the proper calculation in shared or split parenting cases, it could do one, or both, of two things. It could simply amend paragraphs 3 and 5 of Section II(D) of the guidelines to include explicit instructions on how to properly apply the cost credit one time in such cases. Alternatively, it could amend the worksheet so the Trial Court's interactive (online) worksheet would automatically calculate the net support amount in all cases, rather than requiring two separate worksheets to be run and netted in shared or split parenting cases.

With some relatively simple formatting changes, the current worksheet can be amended to handle shared or split parenting cases without having to run the worksheet twice. The amended worksheet attached to this memo is an example. It reflects three changes to the 2017 worksheet:

- The amended worksheet reflects the parenting plan. The first section of the 2017 worksheet lists the number and ages of the children covered by an order. The amended worksheet requires parents to also indicate the parenting plan by checking one of three boxes to indicate whether: (1) both parents share financial responsibility and parenting time approximately equally (shared parenting); (2) one parent has all of the children approximately 2/3 of the time, or (3) each parent provides a primary residence for some of the children (split parenting).
- The amended worksheet includes two columns, rather than one. This allows the child support amount for shared and split parenting cases to be calculated in one worksheet, rather than netting the results of two separate worksheets. In effect, each column steps through the worksheet from the perspective of each parent, based on the parenting plan and other information entered into the first two sections. For example, if one parent has all of the children approximately 2/3 of the time (Box 2), that parent is entered as Parent A at the top of the first column, and the second column is not used except to enter Parent B's income and out-of-pocket expenses. But in cases of shared or split parenting (Box 1 or Box 3), the second column is in place of running a second worksheet. In such cases, either parent's information can be entered in either column, and the worksheet will calculate the net amount of child support to be paid by one parent to the other. The parent with the higher share of support in Line 5(d) of the amended worksheet is identified as the "Payor" in Line 5(e) and the other parent is identified as the "Recipient." Line 5(f) calculates the net amount of support to be paid from the Payor to the Recipient.
- The amended worksheet adjusts for the number and ages of children separately. The third and fourth sections of the amended worksheet include separate adjustments to the support amount in Line 3(b) for one child, to account for the number and ages of the children covered by an order. The worksheet incorporates the amended Table B and Table C discussed in the prior section of this memo. Separating these adjustments creates complete clarity in the worksheet, making the impact of each adjustment fully explicit rather than comingling their separate effects into one combined adjustment.

The rest of the amended worksheet operates in the same way as the current worksheet.

Because the amended worksheet calculates the net support amount for shared or split parenting plans in a single worksheet, it avoids any potential confusion about how to apply the child care and health care cost credit in shared or split parenting cases. Line 5(f) of the amended worksheet indicates the net amount of child support to be paid by the Payor to the Recipient based on the parenting plan indicated in Line 1(b). Then, Section 6 of the amended worksheet applies the same adjustment for child care and health care costs as in the current worksheet, up to 15 percent of the amount in Line 5(f). Because the amended worksheet would be run only once for any parenting plan, there would be no confusion about how to properly apply the child care and health care cost credit regardless of which parenting plan schedule applies.

If the Trial Court decides to adopt the amended worksheet, also amending the guidelines text would be relatively straightforward. Paragraphs 3 and 5 of Section II(D) could be simplified by deleting the instruction to run the worksheet twice and replacing it with text such as:

“These guidelines apply to all types of parenting plan schedules. Information regarding whether the parents share financial responsibility and parenting time for the children approximately equally (shared), whether the children reside primarily with one parent for approximately 2/3 of the time, and whether, in a family with more than one child covered by the order, each parent provides a primary residence for at least one child (split) is entered directly into the worksheet. The worksheet will calculate the presumptive child support order based on the information entered into the worksheet.”

3. Interactive Worksheet Lines 4(f) and 4(g)

Lines 4(f) and 4(g) of the current worksheet are intended to adjust the support amount to reflect a proportional sharing of both parents' child care and health care costs. If the payor's share of those costs is positive, line 4(f) adds that cost to the payor's share of support in line 3(f) of the current worksheet. If the recipient's share of those costs is positive, line 4(g) subtracts that cost from the payor's share of support. In either case, the child care and health care cost credit is capped at 15 percent of the support amount in line 3(f). So, lines 4(f) and 4(g) reflect either a parent's net cost or the 15 percent cap on the cost credit, whichever is less.

The Trial Court's current interactive (online) worksheet properly applies these formulas in all cases except when the amount of the net cost credit happens to be exactly equal to the 15 percent cap. In such instances, the formula looks for the lower amount, but since they are the same it simply returns a value of zero rather than carrying down either 4(d) or 4(e) as the proper value of the credit. Correcting this glitch involves a very simple update to the source code underlying the Trial Court's interactive worksheet. Another advantage of adopting the amended worksheet discussed in this memo would be the opportunity to apply this correction as well. The relevant lines in the amended worksheet are lines 6(f) and 6(g).

4. Conclusion

To summarize, each of the three issues the Administrative Office of the Probate and Family Court asked me to consider could be addressed with relatively straightforward changes to the current guidelines text and worksheet:

- The *equally proportional* adjustment factors in the current Table B could be replaced by instead applying the discount for children 18 or older to the *oldest children last*. This would result in the amended Table B and new Table C presented in this memo, and would assure that child support amounts always increase as additional children are added, regardless of their age. Notably, this would diminish the impact of the age adjustment and would increase child support amounts in some cases by 5 percent to 14 percent relative to current amounts.
- The guidelines worksheet could be amended to accommodate all parenting plans in order to avoid having to run the worksheet twice in shared or split parenting cases. Instead, the worksheet could directly calculate each parent's net share of support in such cases. The guidelines text could be amended accordingly. This would clarify that the child care and health care cost credit should be calculated only once, and applied to the net base support amount paid by the parent with the higher available income. The Trial Court's interactive (online) worksheet could do the proper calculation in all cases based on the amended worksheet attached to this memo.
- The formulas in lines 4(f) and 4(g) of the current interactive (online) worksheet should be modified to apply the proper cost credit in instances where that credit happens to exactly equal the 15 percent cap. This is a simple update to the source code of the Trial Court's current interactive worksheet. The amended worksheet attached to this memo includes this update in lines 6(f) and 6(g).

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