15 20
20
10
5
50

Cutoff	Total score
65	50

Figure 6.7. Scoring chart section of the Information Summary sheet.

Well below the cutoff: The white area indicates scores well below the cutoff. If there are
no concerns about the child's behavior, then a total score in this area indicates that
the child's social-emotional development appears to be on schedule at the time of
administration.

## Scoring Questionnaires with Omitted Items

Parents sometimes omit an item because they are unsure how to respond or have a concern about their child's behavior. Parents occasionally may not respond to an item because it is culturally inappropriate or inappropriate for their family's values. For example, some parents may feel uncomfortable answering questions related to a child's knowledge of "sexual language and activity," so the item about that topic may be left unanswered. It is important to attempt to reach parents as soon as possible to try to discern why items are unanswered. Responses should be obtained whenever possible, assuming that they do not compromise a family's culture or value system. If missing responses are provided, then the person scoring the questionnaire should follow the scoring steps outlined previously.

The following guidelines should be used to interpret ASQ:SE-2 scores when a parent cannot be contacted or a decision is made to omit the items. It is recommended that no more than three items are omitted on any questionnaire interval in order to accurately interpret ASQ:SE-2 results. Although it is possible to calculate an adjusted total score that provides credit for up to three missing items, this adjusted score will not influence the interpretation of the results in the majority of screenings (e.g., a child well below the cutoff will remain well below the cutoff). See the next section, however, if providers wish to create a precise adjusted total score so as not penalize a child for unanswered items.

It is recommended that providers follow these guidelines to interpret ASQ:SE-2 total scores with missing items.

- One or two missing items: If one or two items are missing, then proceed with the child's total
  score. Adjusting the total score will not change the interpretation of the child's score (i.e.,
  the child's adjusted total will still be above the cutoff, close to the cutoff in the monitoring
  zone, or below the cutoff). No additional calculations are needed.
- Three missing items: If three items are missing and the total score of completed items is within 5 points of a cutoff, then adjusting the total score will change the child's results (i.e., results will move from below the cutoff to the monitoring zone, or from the monitoring zone to above the cutoff). For example, if three items are missing, and the unadjusted score is 45 and the monitoring zone starts at 50, then adjusting the child's total score would move the results from below the cutoff into the monitoring zone.

## Calculating an Adjusted Total Score

An average item score is computed by dividing the questionnaire's total points (child's total score for answered items) by the number of items answered. This formula yields an average item score between 0 and 15. The average item score is then multiplied by the number of unanswered questions and added to the child's total score, giving an adjusted total score to compare with the cutoff on the ASQ:SE-2 Information Summary sheet. Figure 6.8 shows an example of calculating an adjusted total score.

## Recording Individual Item Responses (Optional)

If program staff wish to return completed questionnaires to parents but still want to keep a summary of responses, then staff can use the optional ASQ:SE-2 Item Response Sheet to record questionnaire information, including individual item responses, parent concerns, and parent comments. This form, as well as the ASQ:SE-2 Information Summary sheet, may be useful for sharing results with health care providers or developmental specialists. The Item Response Sheet also may be used by the professional to score the parent responses. See Figure 6.9 for an example of an Item Response Sheet.

## 18. Review Written Comments on Scored and Unscored Sections of ASQ:SE-2

A few ASQ:SE-2 scored questions include space for additional comments. These questions are discussed next, along with some guidelines for interpreting parent answers.

Calculate average score:

Total points of questionnaire (child's total score for items answered)

average score

Total number of items answered

Calculate final total score:

Total points of questionnaire + (average score × number of items unanswered)

final total score

Example: There are 35 scored items on the 36 month ASQ:SE-2. A parent answered 32 of 35 questions. The parent checked 24 items with 0 points; 2 items with 10 points; 6 items with 5 points; identified 1 concern (5 points); and left 3 items blank. The child's total score (for answered items) for the questionnaire is 55 points (20 + 30 + 5). The average score (55 points  $\div$  32 items) equals 1.72. This number is the "best-guess point value" for each of the missing items. Because there are three missing items, 1.72 is multiplied by 3 and then added to the child's total score. The final total score (55 + [1.72  $\times$  3]) is 60.16 points.

Average score:

55 (child's total score for items answered)

32 (number of items answered)

1.72 points

Final total score:

55 (total score) + [1.72 (average score) × 3 (number of items unanswered)]

60.16 points

The cutoff for the 36 month ASQ:SE-2 questionnaire is 105; therefore, this score is below the cutoff point. This child's social-emotional development appears to be on schedule at the time of administration. The monitoring program will ask the parent to complete the 48 month ASQ:SE-2 in 6–12 months to continue monitoring the child's social-emotional status. Rather than use the average score, however, it is preferable to contact the parent to obtain the answers to unmarked questions or find out why the parent did not complete specific items.

Figure 6.8. Formulas to calculate an adjusted total score from an average score on ASQ:SE-2.