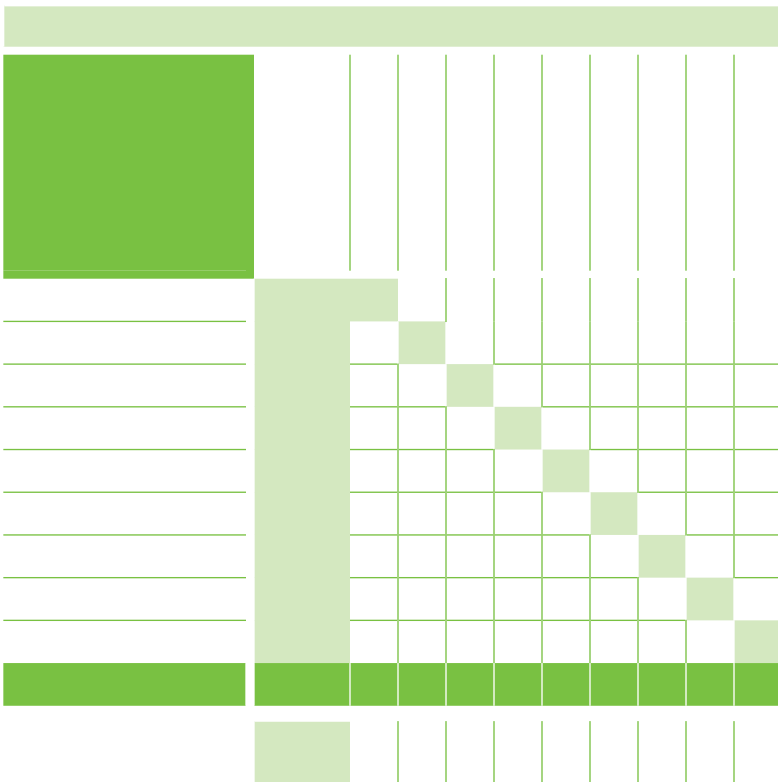
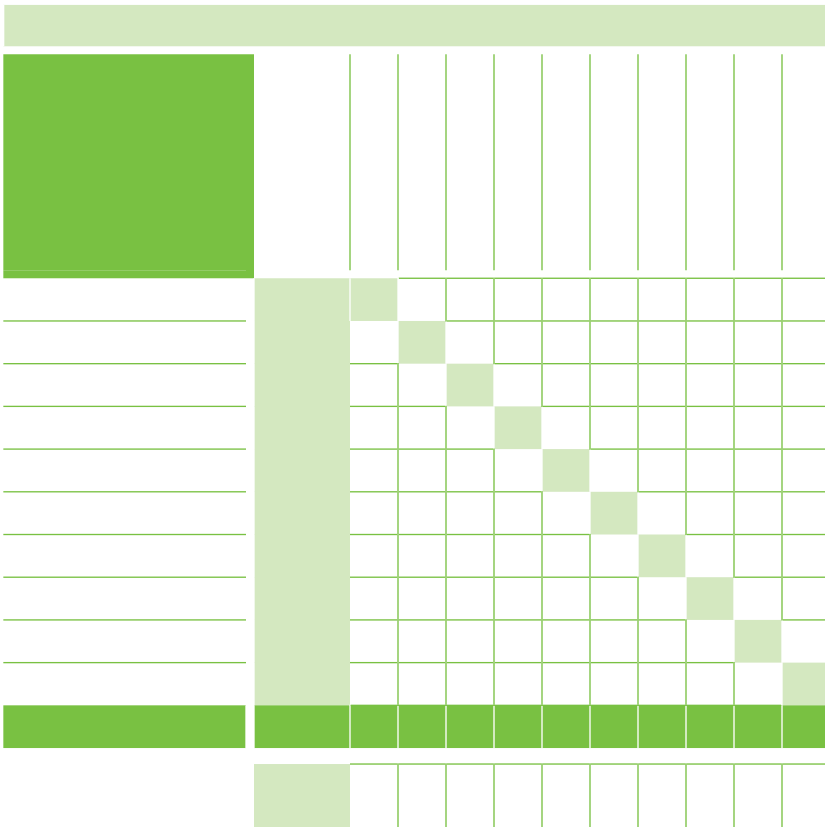
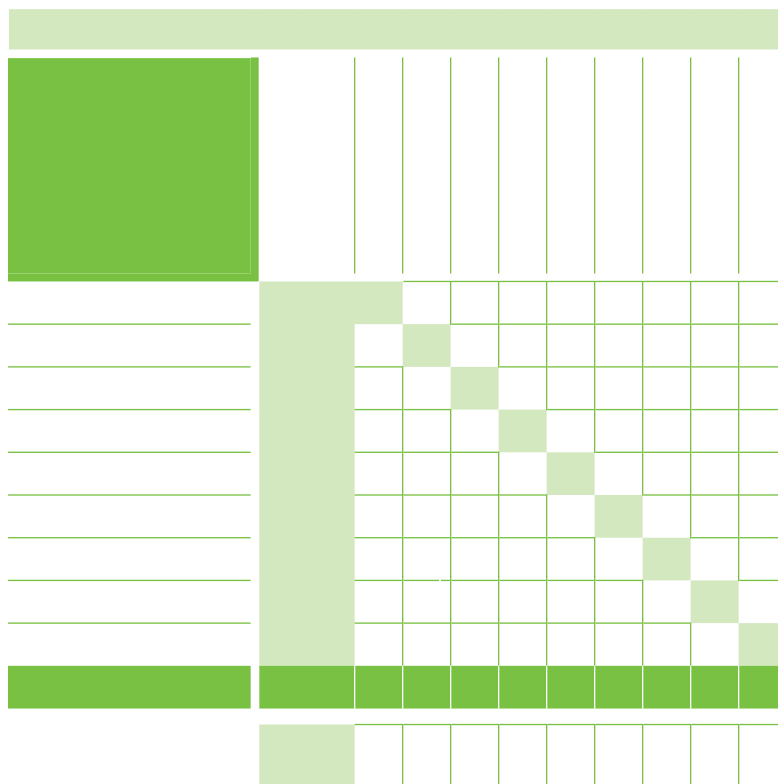
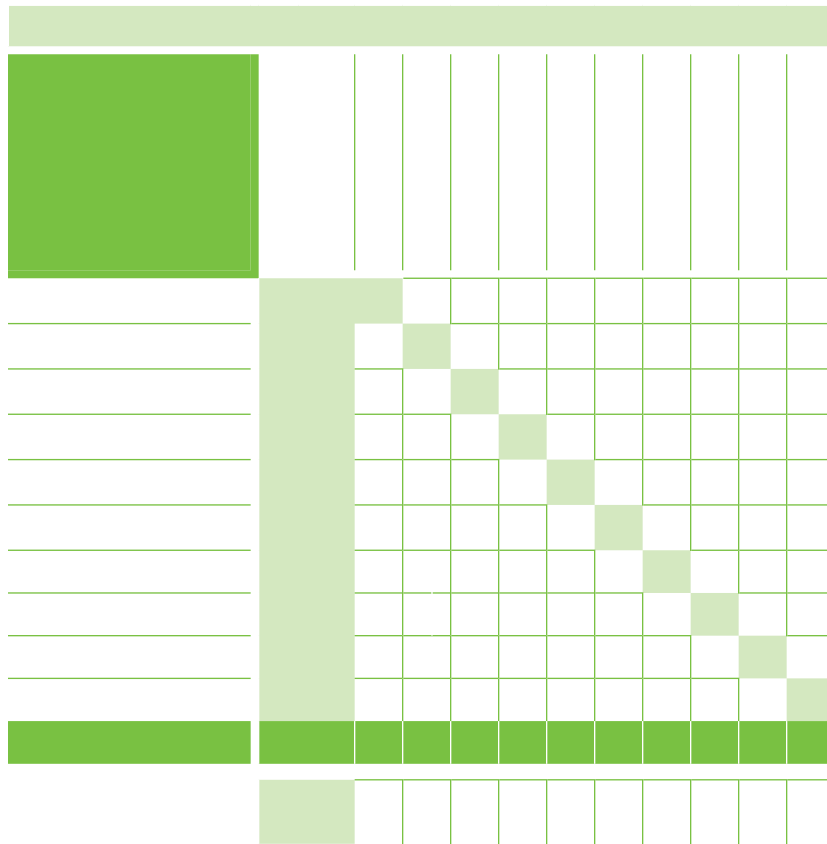


TIMSS Advanced went to great lengths to ensure that comparisons of student achievement in advanced mathematics and physics across countries would be as fair and equitable as possible. The *TIMSS Advanced Assessment Frameworks* was designed to specify the important aspects of advanced mathematics and physics that participating countries agreed should be the focus of

Exhibits B. and B. present the TCMA results for the





The first data column in the advanced mathematics section of Exhibit B. shows the average percent correct on all advanced mathematics test items for each country, together with its standard error. Subsequent columns show the performance of every other country on those items judged appropriate by the country listed at the head of the column. Countries are presented in order of their performance based on average percent correct on all of the advanced mathematics items, from highest to lowest. To interpret this exhibit, choosing a country and reading across its row provides the average percent correct for the students in that country on the items selected by each of the countries listed along the top of the exhibit. For example, the Netherlands, where the average percent correct was 56 percent on the set of advanced mathematics items that it judged appropriate, had, on average, 54 percent of the items judged appropriate by the Russian Federation answered correctly by its students,⁵

the same average achievement on their selected items as on the test as a whole. Sweden performed slightly less well on its own item selection, but Iran, Italy, and especially Lebanon performed better on their

on the Lebanese item selection than on the complete item set, so that relative performance differences among countries were unchanged.

The TCMA results provide evidence that the TIMSS Advanced advanced assessments constitute a reasonable basis for comparing the advanced mathematics and physics achievements of the participating countries. This result is not unexpected, since making the assessment as fair as possible was a major consideration in test development. The fact that all countries indicated that most items were appropriate for their students means that the different average performance scores are

