



CRA Exam Question Development Process

In the item development procedures, the content area covered by each item is identified. When a new version of an examination is needed, a preliminary version is created by randomly selecting the appropriate number of items from the item pool for each content area, as specified in the test blueprint.

This preliminary version of a certification examination is then subjected to the scrutiny of content area experts. First, the entire examination is reviewed to identify items that are duplicates or that may present problems. Second, although each item has already been judged to be psychometrically sound, fair, and content-valid, the same process used to screen items for the item pool is repeated by a second group of content area experts. As in the development of the item pool, the content area experts must reach consensus concerning the acceptability of each item. The use of Item Validity Rating Scales a second time provides further support for the acceptability of the item and documentation of its validity.

Following this, each item that has passed both the item development and test development review is reviewed a third and final time. Again, content area experts evaluate the validity and appropriateness for entry-level radiology administrators and accuracy of keyed responses.

At this point, a final version of the examination has been developed; however, further safeguards are built into the written examination to assure that certification candidates receive a content-valid examination. In every examination, additional items are included. That is, an examination that might be intended to be 160 items is expanded to 185 items. The extra items, which are new, provide a margin of safety. When examining a group of candidates' responses to one version of the certification examination, any items that might appear to be questionable could then be excluded. For example, despite the rigorous screening procedures, an item may be confusing to candidates when it was not confusing to the content area experts. An indicator of this confusion could be that a large number of examinees with high scores answered this item incorrectly. Such an outcome can be resolved in these questions before they are used as scored items in later versions of the examination.