5.1)

Π_{ISBN} (($\sigma_{last\_name='Seuss' \wedge first\_name='Geisel'}$ authors) $\bowtie$ books $\bowtie$ editions)

5.2)

ρ (TempSub, ($\sigma_{subject='short\ story' \vee subject='Horror'}$ subjects))

ρ (TempBooks, $\Pi_{author\_id,\ subject\_id}$ books / $\Pi_{subject\_id}$ TempSub)

$\Pi_{last\_name,\ first\_name}$ (authors $\bowtie$ TempBooks)

5.3)

ρ (TempAuthor, Π_{author_id} ($\sigma_{publication > '1900-01-01' \wedge publication < '2000-01-01'}$ editions $\bowtie$ books)

~~$\Pi_{last\_name,\ first\_name}$~~

$\Pi_{titles,\ publication,\ author\_id,\ last\_name\ first\_name}$ (author $\bowtie$ books $\bowtie$ TempAuthor $\bowtie$ editions)
books.author_id = TempAuthor.author_id

5.4)

ρ (TempSubjectID), $\Pi_{subject\_id}$ (Π_{author_id} ($\sigma_{last\_name='AllenPoe' \wedge first\_name='Edgar'}$ authors $\bowtie$ books)

$\Pi_{author\_id,\ last\_name,\ first\_name}$ (($\Pi_{author\_id,\ subject\_id}$ books) / TempSubjectID) $\bowtie$ authors)