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1. CountryMedal := $\Pi_{CID}(\sigma_{gold > 0 \text{ OR } silver > 0 \text{ OR } bronze > 0}(Athlete))$
CountryNoMedal := $\Pi_{CID}(Athlete) - Countries\_Medals$
Answer := $\Pi_{lname}(Athlete * CountryNoMedal)$

2. JamaicaAthlete := $\Pi_{AID}(\sigma_{cname = \text{'Jamaica'}}(Athlete * Country))$
JamaicaEvents := $\Pi_{EID}(JamaicaAthlete * Result)$
Answer := $\Pi_{sport}(JamaicaEvents * Event)$

3. SwimmingAthlete: $\sigma_{sport = \text{'swimming'}}(Athlete)$
MaxGold := $F_{max(gold)}(SwimmingAthlete)$
Answer := $\Pi_{fname, lname}(MaxGold \bowtie_{max = gold} SwimmingAthlete)$

4. Gold := $\Pi_{CID}(\sigma_{gold >= 1}(Athlete))$
Silver := $\Pi_{CID}(\sigma_{gold >= 1}(Athlete))$
Bronze := $\Pi_{CID}(\sigma_{gold >= 1}(Athlete))$
Answer := $\Pi_{cname}(Gold * Silver * Bronze * Country)$

5. MaxGold := $F_{max(gold)}(Athlete)$
MaxAthlete := $\Pi_{fname, lname, gold, CID}(MaxGold \bowtie_{max = gold} Athlete)$
Answer := $\Pi_{fname, lname, cname, gold}(MaxGold * Country)$

6. NoTicket := $\Pi_{EID}(Event) - \Pi_{EID}(Ticket)$
NoTicketGold := $\Pi_{AID}(\sigma_{medal = \text{'gold'}}(NoTicket * Result))$
Answer := $\Pi_{fname, lname}(NoTicketGold * Athlete)$

7. FirstDate := $F_{min(dateIssued)}(Ticket)$
FirstTime := $F_{min(timeIssued)}(FirstDate * Ticket)$
FirstEvent := $\Pi_{EID}((FirstTime * FirstData) * Ticket))$
FirstTicketGold := $\Pi_{AID}(\sigma_{medal = \text{'gold'}}(FirstEvent * Result))$
FirstTicketCountry := $\Pi_{CID}(FirstTicketGold * Athlete)$
Answer := $\Pi_{cname}(FirstTicketCountry * Country)$

8. GymEvents := $\Pi_{EID}(\sigma_{sport = \text{'gymnastic'}}(Event))$
Gold := $\Pi_{AID, EID}(\sigma_{medal = \text{'gold'}}(Result))$
Answer := Gold ÷ GymEvents

9. NonLaptop := $\sigma_{laptop = False\ AND\ price > 800\ AND\ price < 1200}$(Computer * NonLaptop * ProduceComputer)
Answer := $\Pi_{cname,\ model}$(NonLaptop)

10. NonWindows := $\Pi_{computerID}(\sigma_{os \neq \text{'Windows'}}$(Computer))
NonWindowsCompany := $\Pi_{companyID}$(NonWindows * ProduceComputer)
WindowsCompany := $\Pi_{companyID}$(Company) - $\Pi_{companyID}$(NonWindowsCompany)
Answer := $\Pi_{companyID,\ cname}$(WindowsCompany * Company)

11. ${}_{companyID,\ cname}F_{count(computerID),\ max(price)}$(Company * Computer * ProduceComputer)

12. MaxRam := $F_{max(ram)}$(Computer)
MaxRamComputer := $\Pi_{computerID}$(MaxRam $\bowtie_{max = ram}$ Computer)
ComputerCompany := ProduceComputer * Company
Answer := $\Pi_{companyID,\ cname,\ city}$(MaxRamComputer * ComputerCompany)

13. WirelessScanner := $\sigma_{wireless = True\ AND\ scanner = True}$ (Printer)
MaxPrice := $F_{max(price)}$(WirelessScanner)
MaxPrinter := $\Pi_{printerID}$(MaxPrice $\bowtie_{max = price}$ Printer)
Answer := $\Pi_{companyID,\ cname}$(MaxPrinter * ProducePrinter * Company)

14. ColorPrinter := $\sigma_{color = True}$ (Printer)
CountColorPrinter := ${}_{companyID}F_{count(printerID)}$(ColorPrinter * ProducePrinter)
Printer3 := $\Pi_{companyID}(\sigma_{count >= 3}$ (CountColorPrinter))
Laptop15 := $\Pi_{computerID}(\sigma_{laptop = True\ AND\ screen = \text{'15-inch'}}$ (Computer))
NoLaptop15 := $\Pi_{computerID}$(Computer) - Laptop15)
Answer := Printer3 ∩ NoLaptop15

15. ComputerCompany := ProduceComputer * Company
ComputerCompany2 := ComputerCompany * Computer
ModelGeorgia := ${}_{companyID}F_{count(model)}(\sigma_{state = \text{'Georgia'}\ AND\ laptop = True}$ (ComputerCompany2))
MaxGA := $F_{max(count)}$(ModelGeorgia)
Answer := $\Pi_{companyID}$(MaxGA $\bowtie_{max = count}$ ModelGeorgia)