1. Select the make_name and model_name of all vehicles which have a first production year of 1976

/*Relational Algebra Expression:*/

π make_name, model_name
σ (first_production_year = '1976')
((Make × Model)
⋈ Vehicle.fk_make_id = Make.make_id ∧ Vehicle.fk_model_id = Model.model_id Vehicle)

2. Select the make_name and model_name of all vehicles with the color name Blue

/*Relational Algebra:*/

π make_name, model_name
σ Color.name = 'Blue'
((((Model × Make)
⋈ Vehicle.fk_make_id = Make.make_id ∧ Vehicle.fk_model_id = Model.model_id Vehicle)
⋈ Inventory.fk_vehicle_id = Vehicle.vehicle_id Inventory)
⋈ color_id = Inventory.fk_color_id Color)

3. Select the make_name, model_name and incentive amount for all vehicles with a dealer type incentive

/*Relational Algebra:*/

π make_name, model_name, amount
σ Incentive.type = 'dealer'
(((Make × Model × Incentive)
⋈ Vehicle.fk_make_id = Make.make_id ∧ Vehicle.fk_model_id = Model.model_id Vehicle)
⋈ Vehicle_Incentive.fk_vehicle_id = Vehicle.vehicle_id Vehicle_Incentive)

4. Convert the following query to relational algebra
SELECT Player.id, Team.name, City.name FROM Player
INNER JOIN Team ON Player.team_id = Team.id
INNER JOIN City ON Team.city_id = City.id
WHERE Player.score = 100;

π Player.id, Team.name, City.name
σ Player.score = 100
(((Player)
$\bowtie$ Player.team_id = Team.id Team)
$\bowtie$ Team.city_id = City.id City)

/*5. For problem 3 above, convert your relational algebra query into a SQL query. */

```
select distinct make_name, model_name, amount
from Make, Model, Incentive
inner join Vehicle on Vehicle.fk_make_id = Make.make_id
        and Vehicle.fk_model_id = Model.model_id
inner join Vehicle_Incentive on Vehicle_Incentive.fk_vehicle_id = Vehicle.vehicle_id
Where Incentive.type = 'dealer'
```