

**MySQL Exercise 5: Answer Key**

Question 1:

```
%%sql
SELECT gender, breed_group, COUNT(DISTINCT dog_guid) AS Num_Dogs
FROM dogs
GROUP BY gender, breed_group
ORDER BY Num_Dogs DESC;
```

Question 2:

```
%%sql
SELECT gender, breed_group, COUNT(DISTINCT dog_guid) AS Num_Dogs
FROM dogs
GROUP BY 1, 2
ORDER BY 3 DESC;
```

Question 3:

```
%%sql
SELECT gender, breed_group, COUNT(DISTINCT dog_guid) AS Num_Dogs
FROM dogs
WHERE breed_group IS NOT NULL AND breed_group!="None" AND breed_group!=" "
GROUP BY 1, 2
HAVING Num_Dogs >= 1000
ORDER BY 3 DESC;
```

Question 4:

```
%%sql
SELECT breed_type, AVG(total_tests_completed) AS TotTests, AVG(mean_iti_minutes)
    AS AvgMeanITI
FROM dogs
GROUP BY breed_type
ORDER BY AVG(total_tests_completed) DESC;
```

Question 5:

```
%%sql
SELECT test_name,
    AVG(TIMESTAMPDIFF(HOUR,start_time,end_time)) AS Duration
FROM exam_answers
WHERE timestampdiff(HOUR,start_time,end_time) < 6000
GROUP BY test_name
HAVING AVG (timestampdiff(SECOND,start_time,end_time)) > 0 ORDER BY Duration
desc;
```

Question 6:

```
%%sql
SELECT state, zip, COUNT(DISTINCT user_guid) AS NUM_Users
FROM users
WHERE Country="US"
```

```
GROUP BY State, zip  
ORDER BY State ASC, NUM_Users DESC;
```

Question 7:

%%sql

```
SELECT state, zip, COUNT(DISTINCT user_guid) AS NUM_Users  
FROM users  
WHERE Country="US"  
GROUP BY State, zip  
HAVING NUM_Users >= 5  
ORDER BY State ASC, NUM_Users DESC;
```