

Import the BisonAllFixes.xls data set into a new MS Access database.

Write queries to complete the following problems.

1. Separate the DATETIME field into two fields – Date and Time. Include all of the original fields in the query output.

```
SELECT IDkey, FIXNUM, CDate(Left(DATETIME,10)) AS DateMDY,  
CDate(Right(DATETIME,8)) AS TimeHMS, LATITUDE, LONGITUDE, ALTITUDE,  
TIME, TEMP, FIXSTATUS, NUMSATS, DOP, POINT_X, POINT_Y  
FROM BisonAllFixes;
```

2. For all GPS records, what is the average temperature by year and month

```
SELECT Year(DATETIME) AS Year, Month(DATETIME) AS Month,  
Round(AVG(TEMP),1) AS AvgTemp  
FROM BisonAllFixes  
GROUP BY Year(DATETIME), Month(DATETIME);
```

3. For all GPS records, what is the maximum and minimum value for both latitude and longitude?

```
SELECT MIN(LATITUDE) AS MinLat, MAX(LATITUDE) AS MaxLat,  
MIN(LONGITUDE) AS MinLong, MAX(LONGITUDE) AS MaxLong  
FROM BisonAllFixes  
WHERE (LATITUDE <> 0) OR (LONGITUDE <> 0);
```

4. NumSats records the number of satellites used to compute the GPS location. Determine the number of GPS records by number of satellites used to compute that location (i.e., how many GPS records were recorded with 4 satellites, 5 satellites, etc.).

```
SELECT NUMSATS, Count(NUMSATS) AS CountSats  
FROM BisonAllFixes  
GROUP BY NUMSATS;
```

5. For every month, determine the number of GPS records that do not have a recorded GPS location (i.e., latitude, longitude, and altitude are null).

```
SELECT Month(DATETIME) AS Month, Count(IDkey) AS CountNoGPS  
FROM BisonAllFixes  
WHERE (LATITUDE IS NULL) OR (LONGITUDE IS NULL) OR (ALTITUDE IS  
NULL)  
GROUP BY Month(DATETIME);
```