R Practice - dplyr and NYC Flights

See if you can answer a few more questions about the NYC flights data set

Accessing the data

Make sure you load the tidyverse package which includes dplyr as well as the nycflights13 package to get the flights data

```r
library(tidyverse)
library(nycflights13)
```

Recall that the library includes the following tables

![Diagram of data relationships]

Use dplyr to answer these questions

Note that these can all be answered in one dplyr chain.

1) What destination received most flights in June?

2) Which carrier had the greatest average distance per flight?

3) Which flight traveled the fastest (overall miles per hour)?
4) What day had the largest average arrival delay for all flights? (only count positive values)

5) What was the total distance for all flights in January? What was the average distance per flight?

6) What day of the week saw the most flights? (Hint, use the "time_hour" column which is a date/time column and use google to find a function to give you the weekday for a date).

7) What was the average number of seats and engines on the planes that left from NYC on July 4? (The "seats" and "engines" data comes from the the planes table; Warning: Be careful with your joins!)

8) How many airlines do not have the word "air" somewhere in their name? (Hint, try googling for a function that can do string matching in R)

9) What was the most common plane model to fly out of NYC in October (there is a "model" column in the planes table)?

10) How many planes (tailnum) only flew one route (flight) but flew that route more than 10 times?

11) Which scheduled departure hour (use the "hour" column) had the largest proportion of flights delayed (dep_delay) longer than 5 min?

12) Which flight(s) had the greatest scheduled length (time between scheduled departure and arrival)? (Warning: Take notice how the values of sched_arr_time and sched_dep_time are formatted in the table).

**Expected Values**

1) Chicago O'Hare (ORD) with 1574
2) Hawaiian Airlines Inc. with an average of 4983 miles per flight
3) Flight 1499 to ATL flew 762 miles with average speed of 703.3846
4) July 10, with an average delay of 110 minutes
5) 27,188,805 total miles with an average of 1006.844 miles per flight
6) Monday with 50690
7) Seats: 140.6581 Engines: 1.991974
8) Only Virgin America
9) The A320-232 with 3717 flights
10) 12 planes only flew one route but did so more than 10 times
11) 9PM with 44.6%
12) Flight 51 with 6 hours 40 minutes