1a)
From analysis, I was able to conclude that the top 5 routes are:

	Route	Country	Passengers_Total
228	Sydney - Auckland	New Zealand	2961212
280	Sydney - Singapore	Singapore	1440018
281	Sydney - Tokyo	Japan	1292116
249	Sydney - Hong Kong	Hong Kong	1151900
218	Perth - Singapore	Singapore	952926

And the bottom 10 routes are:

	Route	Country	Passengers_Total
130	Hobart - Los Angeles	USA	2
134	Hobart - Tokyo	Japan	1
87	Cairns - Honiara	Solomon Islands	1
303	Townsville - San Francisco	USA	1
125	Darwin - Zagreb	Yugoslavia	1
151	Melbourne - Denver	USA	0
190	Perth - Bandar Seri Begawan	Brunei	0
45	Brisbane - Colombo	Sri Lanka	0
13	Adelaide - Harare	Zimbabwe	0
43	Brisbane - Chicago	USA	0

1b)

After analyzing seasonal patterns, I was able to conclude that the peak season tends to be December while the low season tends to be may. This trend makes sense as summer comes around in December in Australia, while May is the time of fall.

After analyzing travel patterns, a majority of travel happens with surrounding countries in Asia / the Pacific region. But, travel from USA and UK is also quite popular.

I also analyzed routes that weren't popular and came to the suggestion that maybe routes such as Sydney – Nauru should be terminated as they tend not to have passenger traffic.

2) / 3)

To begin, I trained a Linear Regression model. I thought that this would be effective with this dataset given that there isn't too much data to work with when you narrow it down to one route. But, the features were too complex to be represented by a linear regression model, so I decided to use Random Forest. I trained a

Random Forest model with different configurations, in order to determine what level of depth would be most successful with this dataset. In the end, I was able to train a model with explains about 80% of variance in the Sydney-Aukland route and predicts passenger traffic with an average error of ~4000 passengers a month.