

Exercise 1 - How Deep is the Ocean? September 17, 2018.

EPIB607 - Inferential Statistics^a

^aFall 2018, McGill University

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This in-class exercise will introduce you to sampling distributions for means and proportions.

Sampling distribution | Means | Proportions | Standard error | Standard deviation | Parameter | Statistic

1. What percentage of the world's surface is covered by water?

The data provided by the [Scripps Institution of Oceanography](#) can provide an answer, but some work is required on your part. James Hanley (JH) has randomly sampled $n = 5$ and $n = 20$ latitudes and longitudes for every student in the class. This document contains unique latitudes and longitudes for

```
[1] "Bhatnagar, Sahir"
```

and was sent in an email (using the [gmailr](#) package) as a pdf attachment to the following address:

```
[1] "sahir.bhatnagar@mcgill.ca"
```

A sample of 5.

```
Longitude.n.5 <- c(-8.338,121.546,56.551,179.704,64.075)
```

```
Latitude.n.5 <- c(38.531,24.208,11.288,79.076,-44.077)
```

A sample of 20.

```
Longitude.n.20 <- c(129.865,8.409,69.401,-94.07,-141.684,84.384,4.708,59.453,170.693,145.75,  
9.223,120.522,-154.618,121.445,-20.45,-90.918,101.493,127.653,97.46,124.264)
```

```
Latitude.n.20 <- c(65.213,-17.739,10.111,-44.445,-59.084,21.162,-59.658,3.739,67.245,-4.353,  
-15.5,14.423,-6.199,-32.676,-28.391,-21.106,-58.707,-20.757,17.094,24.236)
```