

Assignment 5

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Exercise 1

a)

```
mdy("September 13, 2010")
```

```
## [1] "2010-09-13"
```

b)

```
mdy("Sept 13, 2010")
```

```
## Warning: All formats failed to parse. No formats found.
```

```
## [1] NA
```

c)

```
mdy("Sep 13, 2010")
```

```
## [1] "2010-09-13"
```

d)

```
mdy("S 13, 2010")
```

```
## Warning: All formats failed to parse. No formats found.
```

```
## [1] NA
```

Abbreviations of months need to be the first three letters of the month.

e)

```
mdy("07-Dec-1941")
```

```
## [1] "2041-07-19"
```

f)

```
mdy("1-5-1998")
```

```
## [1] "1998-01-05"
```

Using single digits for both the month and day makes it hard to know which is the month or day.

g)

```
dmy("21-5-1998")
```

```
## [1] "1998-05-21"
```

It is clear to see which is the day, and which is the month. h)

```
ymd_hm("2020-May-5 10:30 am")
```

```
## [1] "2020-05-05 10:30:00 UTC"
```

i)

```
ymd_hm("2020-May-5 10:30 am PDT (ex Seattle)")
```

```
## [1] "2020-05-05 10:30:00 UTC"
```

j)

```
ymd_hm("2020-May-5 10:30 am AST (ex Puerto Rico)")
```

```
## [1] "2020-05-05 10:30:00 UTC"
```

Exercise 3

```
dates <- c("May-8-2025 3:00 PM","May-8-2025 3:00 PM")
zones <- c("US/Arizona","Pacific/Auckland")
data.frame(date = dates, zone = zones) %>%
  rowwise() %>%
  mutate(date = mdy_hm(date,tz = zone))
```

```
## # A tibble: 2 x 2
```

```
## # Rowwise:
```

```
##   date           zone
```

```
##   <dtm>          <chr>
```

```
## 1 2025-05-08 15:00:00 US/Arizona
```

```
## 2 2025-05-07 20:00:00 Pacific/Auckland
```

After finding what the tz identifier was for Auckland, New Zealand. I applied each timezone rowwise as only a single timezone can be sent to the dates vector.

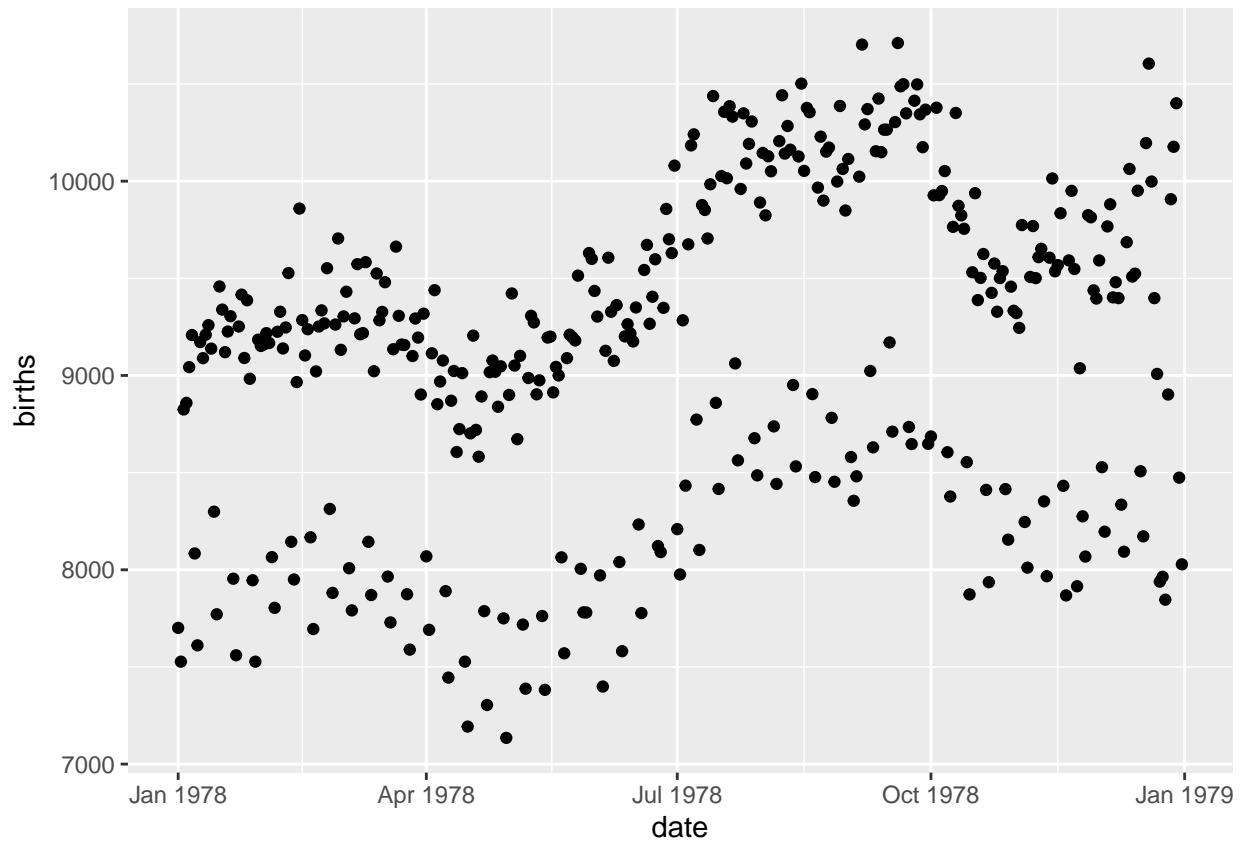
Exercise 5

a)

```
births1 <- Births78 %>%
  select(date,births)
```

b)

```
births1 %>%
  ggplot(aes(x = date, y = births)) +
  geom_point()
```



There are almost two graphs, it seems consistently there are certain days which have much more births than other days. I think it might be people having kids on weekends.

C)

```
births2 <- births1 %>%
  mutate(dow = wday(date, label=TRUE, abbr=FALSE))
```

d)

```
births2 %>%
  ggplot(aes(x = date, y = births)) +
  geom_point(aes(color = dow))
```

