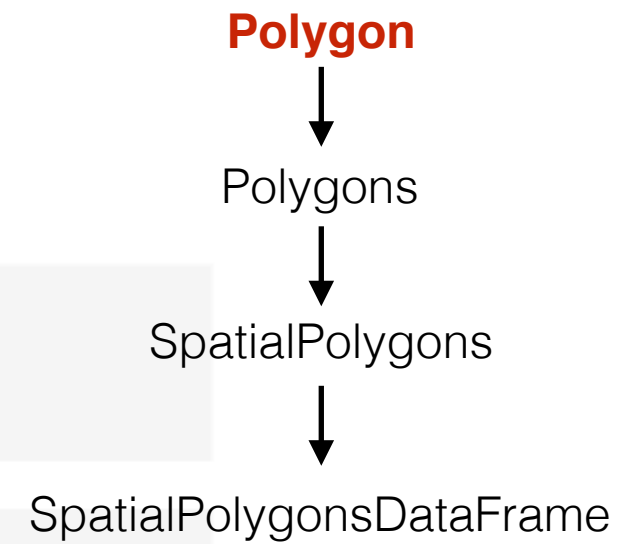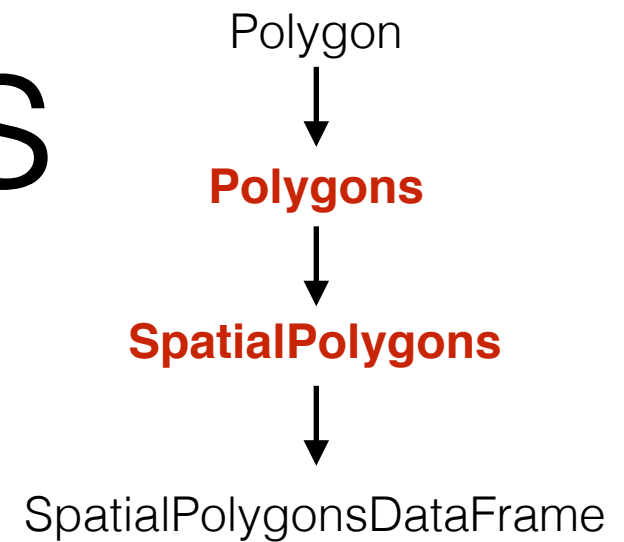# Polygon

```r
P <- Polygon( c )
P
```

```
## An object of class "Polygon"
## Slot "labpt":
## [1] -113.89179   28.89114
##
## Slot "area":
## [1] 0.1849395
##
## Slot "hole":
## [1] FALSE
##
## Slot "ringDir":
## [1] 1
##
## Slot "coords":
##              [,1]     [,2]
## [1,] -114.2935 29.32541
## [2,] -113.9449 29.01457
## [3,] -113.6679 28.96651
## [4,] -113.4897 28.72796
## [5,] -113.9914 28.66056
## [6,] -114.2935 29.32541
```

SpatialPolygons

Polygon
↓
Polygons
↓
SpatialPolygons
↓
SpatialPolygonsDataFrame

ID for Polygons Important

```
Ps <- Polygons( list(P), ID="Bob")
SPs <- SpatialPolygons( list(Ps))
proj4string(SPs) <- CRS(proj4string(pts))
SPs
```

```
## class      : SpatialPolygons
## features   : 1
## extent     : -114.2935, -113.4897, 28.66056, 29.32541  (xmin, xmax, ymin, ymax)
## coord. ref. : +proj=longlat +datum=WGS84 +no_defs +ellps=WGS84 +towgs84=0,0,0
```