

## distances

```
library("sp")  
library("raster")  
library("rgeos")
```

```
## rgeos version: 0.5-9, (SVN revision 684)  
## GEOS runtime version: 3.10.2-CAPI-1.16.0  
## Please note that rgeos will be retired by the end of 2023,  
## plan transition to sf functions using GEOS at your earliest convenience.  
## GEOS using OverlayNG  
## Linking to sp version: 1.4-7  
## Polygon checking: TRUE
```

```
library("sf")
```

```
## Linking to GEOS 3.10.2, GDAL 3.4.2, PROJ 8.2.1; sf_use_s2() is TRUE
```

the distances between a matrix of 2D points and a single 2D point

```
?spDistsN1
```

the geographic distance between two (sets of) points

```
?pointDistance
```

the distance between the given geometries

```
?gDistance
```

the distance between pairs of geometries

```
?st_distance
```

the distance from a set of points to all cells of a Raster

```
?distanceFromPoints
```