

0.1 `ternaryplot`: Ternary diagram

Description

Visualizes compositional, 3-dimensional data in an equilateral triangle (from the vcd library, Version 0.1-3.3, Date 2004-04-21), using plot graphics. Differs from implementation in vcd (0.9-7), which uses grid graphics.

Usage

```
ternaryplot(x, scale = 1, dimnames = NULL, dimnames.position = c("corner", "edge", "none"),
            dimnames.color = "black", id = NULL, id.color = "black", coordinates = FALSE,
            grid = TRUE, grid.color = "gray", labels = c("inside", "outside", "none"),
            labels.color = "darkgray", border = "black", bg = "white", pch = 19, cex =
            prop.size = FALSE, col = "red", main = "ternary plot", ...)
```

Arguments

- x** a matrix with three columns.
- scale** row sums scale to be used.
- dimnames** dimension labels (defaults to the column names of **x**).
- dimnames.position, dimnames.color** position and color of dimension labels.
- id** optional labels to be plotted below the plot symbols. **coordinates** and **id** are mutual exclusive.
- id.color** color of these labels.
- coordinates** if TRUE, the coordinates of the points are plotted below them. **coordinates** and **id** are mutual exclusive.
- grid** if TRUE, a grid is plotted. May optionally be a string indicating the line type (default: "dotted").
- grid.color** grid color.
- labels, labels.color** position and color of the grid labels.
- border** color of the triangle border.
- bg** triangle background.
- pch** plotting character. Defaults to filled dots.
- cex** a numerical value giving the amount by which plotting text and symbols should be scaled relative to the default. Ignored for the symbol size if **prop.size** is not FALSE.

prop.size if TRUE, the symbol size is plotted proportional to the row sum of the three variables, i.e. represents the weight of the observation.
col plotting color.
main main title.
... additional graphics parameters (see **par**)

Details

A points' coordinates are found by computing the gravity center of mass points using the data entries as weights. Thus, the coordinates of a point $P(a,b,c)$, $a + b + c = 1$, are: $P(b + c/2, c * \sqrt{3}/2)$.

Author(s)

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References

M. Friendly (2000), *Visualizing Categorical Data*. SAS Institute, Cary, NC.

See Also

ternarypoints

Examples

```

data(mexico)
if (require(VGAM)) {
  z.out <- zelig(as.factor(vote88) ~ pristr + othcok + othsocok,
                 model = "mlogit", data = mexico)
  x.out <- setx(z.out)
  s.out <- sim(z.out, x = x.out)

  ternaryplot(s.out$qi$ev, pch = ".", col = "blue",
              main = "1988 Mexican Presidential Election")
}

```