

COUNTDOWN Challenge Topology - The Mathematics of Distortion

Shapes are topologically equivalent if they can be stretched or bent into the same shape without connecting or disconnecting any points.

PART I

ABCDEFGHIJKLMNOPQRSTUVWXYZ

Using the forms of capital letters as guides, stretch or bend the shapes in column 1 into as many letters as possible.

Shape	# of letters	Topological Equivalent
	12	C M _____ ...continue below...
+	2	K _____
○	2	P _____
⊖	2	D _____
T	4	F _____
○	2	_____

Which letters are not topologically equivalent to **any** of the given shapes?

PART II

Each of the following designs is topologically equivalent to one of the six shapes used in the table above. Match each shape to its topologically equivalent design. Using the same shapes as models, make your own set of topologically equivalent shapes on the back of this paper.

A. |

B. +

C. ○

D. ⊖

E. T

F. ○

1.....

2.....

3.....

4.....

5.....

6.....