A puzzler about Venn diagrams



- ► The 2-set diagram above has 2-fold rotation symmetry: rotate it through a half circle and it remains the same
- ► The 3-set diagram has 3-fold rotation symmetry: rotate it through one third of a circle, or two thirds of a circle, and it remains the same
- ▶ The 5-set diagram has 5-fold rotation symmetry.

Question: Is there a drawing of a 4-set Venn diagram that has 4-fold rotation symmetry?