

Sorting with Carroll and Venn diagrams

WHAT THIS LESSON TEACHES

A Venn diagram uses two overlapping circles to sort items by two yes-or-no rules. Items go inside one circle, both, or outside both.

- A red square goes in the overlap of 'is red' and 'has four sides'.
- A blue triangle sits outside both 'is red' and 'has four sides'.

MODEL THIS ON THE BOARD

SORTING A SHADED SQUARE

- 1 Test the rule 'has straight sides': yes so place inside that circle.
- 2 Test the rule 'is shaded': yes so it also belongs in the second circle.
- 3 The item lands in the overlap where both rules are true.

DISCUSSION STARTER

REFLECT Which felt clearer today — the Venn hoops or the Carroll boxes?

ANSWER KEY

Scaffold: visual check on the page

Q1: in the "is red" region only

Q2: in the "has four sides" region only

Q3: in the overlap

a) Always — The overlap is for items that pass both yes-or-no tests.

b) Never — It goes inside the one circle it matches.

c) Always — It matches both rules so the overlap is correct.

d) Always — Outside means it fails both yes-or-no tests.