

# Part-Part-Whole Board: Difference to 20

**Number of Students:** Small group (variation: pairs)

**Materials:**

- Part-part-whole board
- Numeral cards (1 set to 20 per group)
- 1 pencil (or whiteboard marker if the boards are laminated)

**Preparation:**

Sufficient numeral cards and part-part-whole boards need to be photocopied / printed.

Part-part-whole board can be laminated for longevity, although this is not strictly necessary. Numeral cards should be laminated for easy handling however.

**How :**

Each student receives a part-part-whole board.

The teacher places a numeral card face up in the centre section of each board, and a second numeral card of lesser value in one of the other sections.

The central card represents the total. Players must calculate the value of the second addend (to give the total represented by the central card), and write it in the remaining space on the part-part-whole board.

The teacher then asks each student to 'prove' their answer to the group by explaining the process they followed, or reworking the addition out loud. Students should be encouraged to work out if it would be easier to count-on or count-back before they begin to solve the problem. They should also be encouraged to use any number facts they can remember (eg. 8 is 5 and 3).

**Note:** If students find this too difficult at first, replace the numeral cards with counters until they understand the idea.

**Variation:**

When students are confident in solving these kind of problems, they can work in pairs, taking turns to pose each other addition problems in the same way (using the same materials).