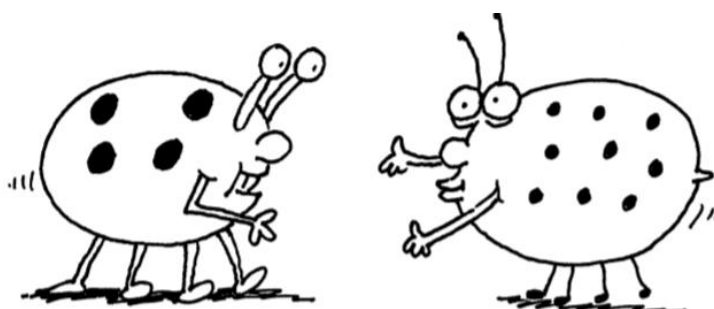


Objective: Solve problems, including missing number problems, involving multiplication and division, including integer scaling problems (e.g. four times as high) and correspondence problems in which m objects are connected to n objects

Year 3 Task: 'Zids and Zods'

<https://webarchive.nationalarchives.gov.uk/20110202173247/https://nationalstrategies.standard.s.dcsf.gov.uk/node/85260>

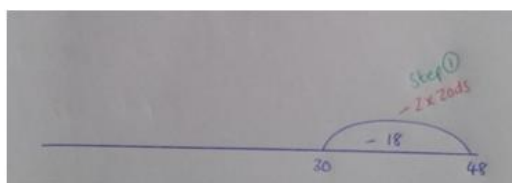


Zids have 4 spots. Zods have 9 spots.

Altogether some Zids and Zods have 48 spots. How many Zids are there? How many Zods?

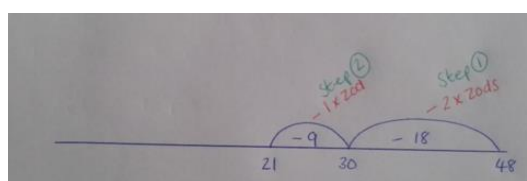
Worked example

Step 1:



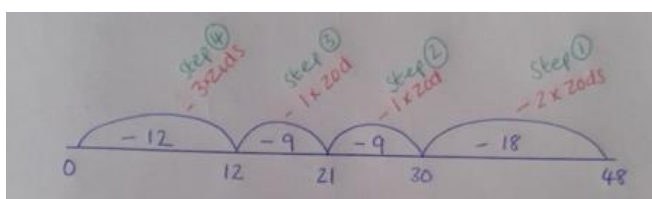
30 is not a multiple of 4, so I know that in order to make up the remaining 30 spots, they can't all be just Zids.

Step 2:



21 is not a multiple of 4, so I know that in order to make up the remaining 21 spots, they still can't all be just Zids.

Steps 3 and 4:



12 is a multiple of 4, so I know that in order to make up the remaining 12 spots, there must be 3 Zids.

Therefore there are 3 Zids (12 spots) and 4 Zods (36 spots) to make 48 spots altogether.

Variation

- **What if...?**

Zids have 5 spots, Zods have 7 spots, and there are 140 spots altogether?

Find as many solutions as you can.

Space for workings

Answers:

If Zids have 5 spots and Zods have 7 spots, the possible ways of making 140 are:

28 Zids; 21 Zids and 5 Zods; 14 Zids and 10 Zods; 7 Zids and 15 Zods; 20 Zods.