

# FISH NETS



# Fish Nets

## What's the point of this task?

This task encourages students to apply their knowledge of number operations to create and compare groups. The interactive encourages the use of the guess, check and improve strategy and encourages students to work systematically. The problem may also be solved using algebraic thinking and notation.

Multiple versions of this task are available via the 'New' button in the interactivity. These allow students to generalize the reasoning they used to solve the original problem.

## Questions to facilitate the learning

Questions that might be asked include:

- Which clue will you start with?
- How does that help you with the other clues?
- Does your solution match all the clues? If not, what could you try next?
- How will you keep track of the solutions you have tried?

## Curriculum connections

This activity relates to number comparisons, addition, subtraction, multiplication and developing algebraic thinking.

## Scaffolding the learning

- Is there a net that appears in every clue? If so, how might this information help you?

## Extending the learning

- Could you solve this problem without using the interactive or drawing the fish?
- Could  $x$  represent one net? Which one? How will this help you name the other nets?

## Solution

- Net 1 has 3 fish, Net 2 has 9 fish, Net 3 has 4 fish and Net 4 has 8 fish.

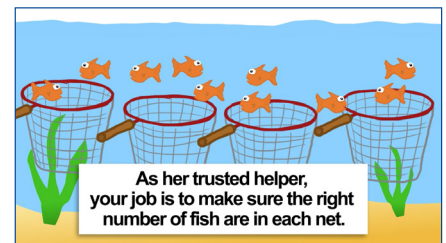
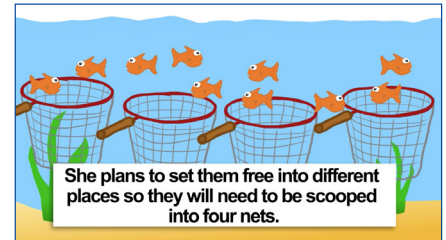
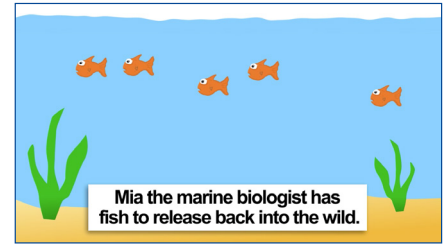
$$3 + 9 + 4 + 8 = 24$$

- Using algebraic notation

$x$  represents Net 3. Therefore Net 1 is  $x - 1$ , Net 2 is  $x + 5$  and Net 4 is  $2x$ .

$$x + (x - 1) + (x + 5) + 2x = 24$$

Simplified this is  $5x + 4 = 24$ ;  $5x = 20$ ;  $x = 4$



# Fish Nets

Mia the marine biologist has 24 fish to set free.

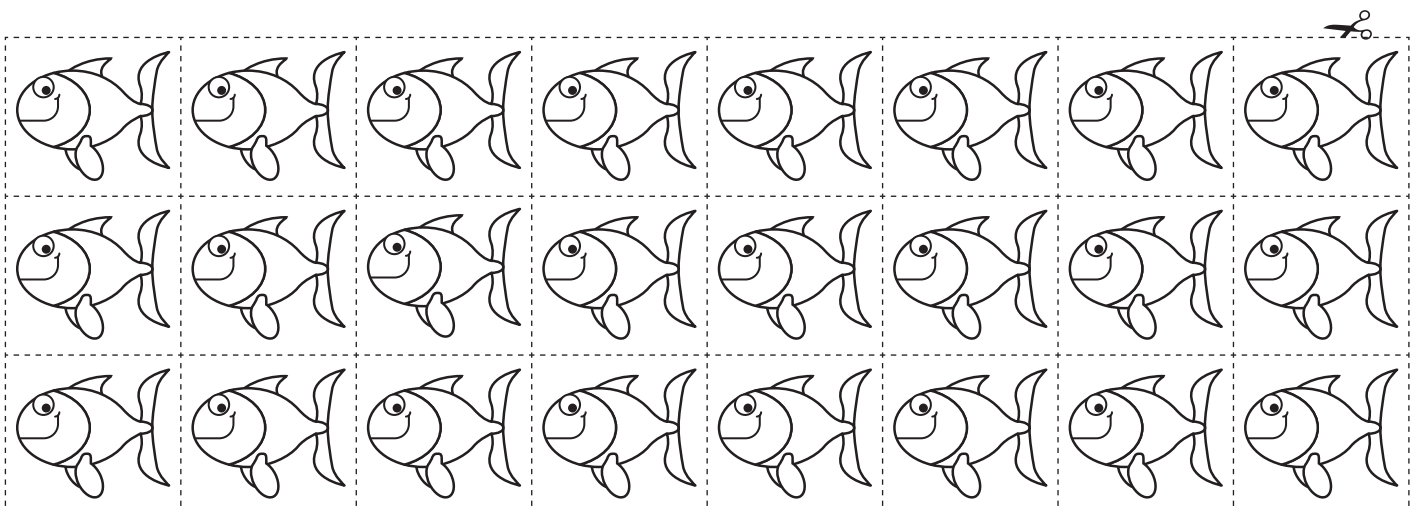
She plans to set them free in different places so puts them into four nets.

The first net has 1 less fish than the third net.

The second net has 5 more fish than the third net.

The fourth net has twice as many fish as the third net.

How many fish in each net?



Name \_\_\_\_\_