# Reasoning and Problem Solving
# Multiplication and Division Consolidation – Year 3

## National Curriculum Objectives

Mathematics Year 3:Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables

Mathematics Year 3:Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods

Mathematics Year 3: Solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects

## About This Resource

This resource is aimed at Year 3 Expected and has been designed to give children the opportunity to consolidate the skills they have learned in Autumn Block 3 – Multiplication and Division.

The questions are based on a selection of the same 'small steps' that are addressed in the block, but are presented in a different way so children can work through the pack independently and demonstrate their understanding and skills.

## Small Steps

Multiply by 3
Divide by 3
The 3 times table
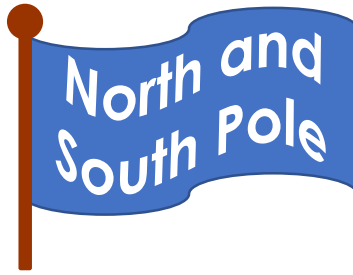Multiply by 4
Divide by 4
The 4 times table
Multiply by 8
Divide by 8
The 8 times table

More Year 3 Multiplication and Division resources.

Did you like this resource? Don't forget to review it on our website.

# classroomsecrets.co.uk
**Consolidation Pack – Year 3 – Teaching Information**

**North and South Pole**

Ever wondered what life is like on the top and the bottom of the world?

Antarctica (The South Pole) was only discovered in 1820, it is the second smallest continent. It is a land of ice. The Arctic Ocean (The North Pole) is by far the smallest and the shallowest of the worlds oceans. It has a thick layer of ice floating in the centre of the ocean, about 5m thick. Would you like to learn more? You'd better get some warm clothes on, it's going to be cold!

Did you know?
Polar bears and penguins will never meet in the wild, only in zoos. Polar bears live in the Arctic while penguins live in Antarctica.

Ok, are you ready for the first expedition? We are going to face a few challenges along the way but I'm sure with your help we will be able to solve anything.

There are are many creatures in the Arctic Ocean, they have adapted to the cold in order to survive.
Polar bears have very large, furry feet, this helps them to distribute their weight evenly on the thin ice. They have lots of white fur which helps to keep them warm.
There are also snowy owls, snow geese, grey wolves, beluga whales, harp seals and arctic foxes.
These animals mainly eat fish, let's make sure everyone gets fed today!

1. Match the animals so they each get the correct amount of food.
The wolves need to have 5 fish each. The whales need 3 fish each. The polar bears need 6 fish each.
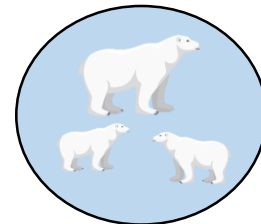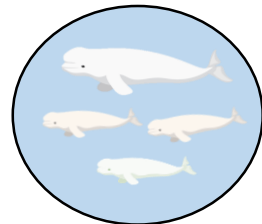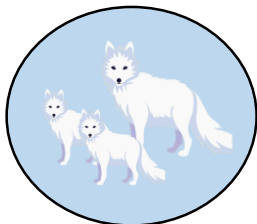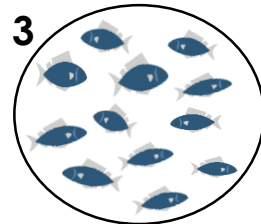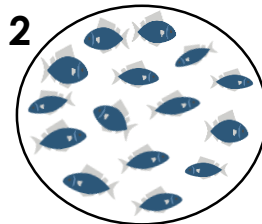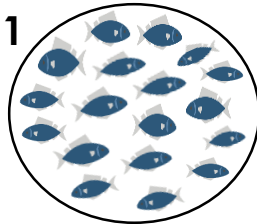
Now we've sorted out the animals, we need to help the families here in Greenland. Greenland is the largest island in the world and it is next to the Arctic Ocean. It is completely covered in ice, all year round. Fire is essential to cook and keep the people warm.

2. Aani and her husband Klaus share the firewood that they have collected for the families in the village equally.
They have collected 33 pieces of firewood and there are 3 families that live in their village.
How many pieces will each family get?

$$33 ÷ 3 = \boxed{\phantom{xxx}}$$

Do you like sledging? Travelling around Greenland can be lots of fun.
People use dogs to pull their sledges to travel around.

3. For every sledge we need 8 strong dogs to pull it efficiently.
Fill in the table to work out how many dogs we will need for 3, 4, 5 and 6 sleds?

| Number of sledges | Number of dogs |
|---|---|
| 3 | |
| 4 | |
| 5 | |
| 6 | |

If there were 56 dogs, how many sledges would we need?   $\boxed{\phantom{xxx}}$ **sledges**

Brilliant! So, we have the dogs and sledges sorted, now we need your help to get enough rope to tie the sledges together.

4. Each piece of rope is 4m, there are 6 pieces of rope.
How long is the rope when they are joined together?

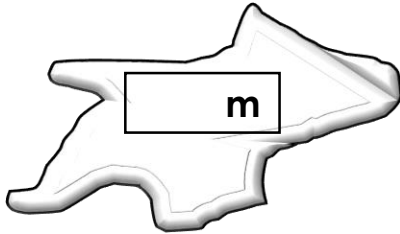The rope is $\boxed{\phantom{xxx}}$ m long.

Now, lets head down to The South Pole and join some penguins.
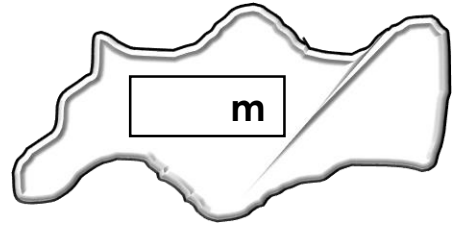
5. Here in Antarctica the ice is three times as thick as in the Arctic Ocean.
How thick is the ice in Antarctica?
Look back at the introduction to find out how thick the ice in the Arctic Ocean is and then workout the thickness of the ice in Antarctica.
Write your answers in the ice floes (large pieces of ice that float on the water).

m

Depth of the ice in the Arctic

m

Depth of the ice in Antarctica

The tallest penguin in Antarctica is the Emperor penguin, it can grow to a very tall 128cm.

6. 128 is a multiple of 8. Tick all the other penguins who have a height which is a multiple of 8?

64cm          108cm          72cm          96cm

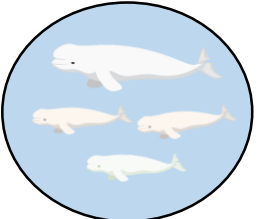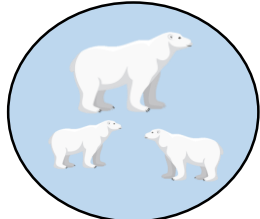In Antarctica shelters are built out of ice, these are called igloos.
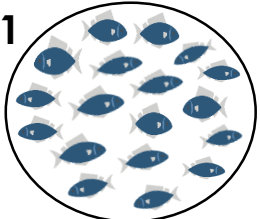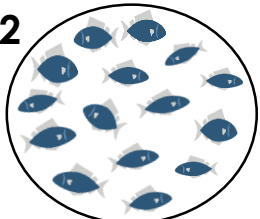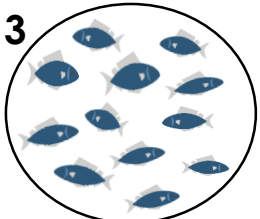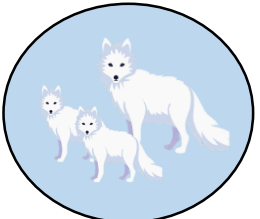
7. How many igloos can we build out of 48 blocks of ice.
Each segment of the igloo uses 4 blocks of ice. How many segments will the igloo have?

1.

1       2       3

| **2** | **3** | **1** |

2. 33 ÷ 3 = **11**
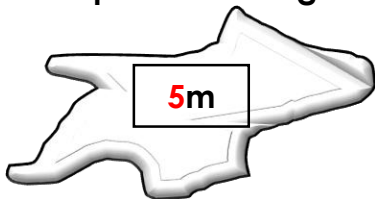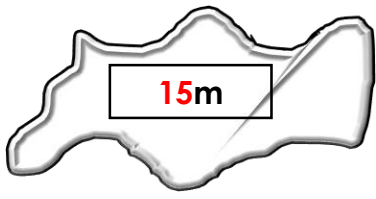
3.

| Number of sledges | Number of dogs |
|---|---|
| 3 | **24** |
| 4 | **32** |
| 5 | **40** |
| 6 | **48** |

We would need **7** sledges.

4. The rope is **24**m long.

5.

**5**m       **15**m

Depth of the ice in the Arctic     Depth of the ice in Antarctica

6.

64cm    108cm    72cm    96cm
 ✓               ✓      ✓

7. **48 ÷ 4 = 12**
**The igloo will have 12 segments.**