

Farmer Joe's Busy Day

Assessment Focus

This task focuses on aspects of the following Requirements for **Using Mathematics**. These Requirements are addressed through **Number** and **Handling Data** at **Level 1**.

Requirements for Using Mathematics
Across the curriculum, at a level appropriate to their ability, pupils should be enabled to:
<ul style="list-style-type: none"> choose the appropriate materials, equipment and mathematics to use in a particular situation;
<ul style="list-style-type: none"> use mathematical knowledge and concepts accurately; work systematically and check their work;
<ul style="list-style-type: none"> explore ideas, make and test predictions and think creatively;
<ul style="list-style-type: none"> use mathematical understanding and language to ask and answer questions, talk about and discuss ideas and explain ways of working.

Task Description

In this task pupils sort, count and then continue patterns with animal pictures. They are required to:

- record their work using numbers up to 10;
- sort and classify pictures for one criterion and re-sort for a different criterion;
- look for and talk about patterns;
- show some organisation in their practical work; and
- use appropriate mathematical language to respond to questions about their work.

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Prior Knowledge/Experience

To complete this task, pupils should have experience of:

- using numbers up to 10 through counting activities;
- recognising and writing numbers up to 10;
- matching to find out which set has more or less;
- sorting objects and using language associated with sorting; and
- copying and continuing a pattern.

Resources

For pupil use

Pencil

Five big yellow cubes

Nine small yellow cubes

Plastic farm animals (optional)

Resource 1

Resource 2

Resource 3

Resource 4

For teacher use

Teacher Prompt Sheet

Teacher Resource

Answers

Points to Consider when Assessing Using Mathematics

Observe how pupils:

- count the animals and record answers;
- identify the set which has more;
- sort and re-sort for one criterion; and
- continue the patterns.

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Managing the Task

The task is divided into four parts.

Pupils work individually, in pairs or in small groups. Pupil achievement may be judged by the teacher based on any assessment evidence observed and gathered from group and individual work.

In Part A, pupils are asked to count and write the number of animals in Farmer Joe's fields (Resource 1).

The teacher can use Resource 2 to record pupil responses for Parts B, C and D.

In Part B, pupils are asked to find out if there are more big bales or more small bales.

In Part C, pupils are asked to sort the pictures for one criterion, give reasons for sorting and re-sort for a different criterion. The teacher should provide pupils with a Tree diagram of sufficient size to allow them to place all their pictures in the appropriate place. Exemplar Tree diagrams with labels/headings are included.

In Part D, pupils are asked to continue the animal pattern (Resources 3 and 4).

The teacher may use plastic farm animal shapes as an alternative to pictures if preferred.

Some pupils with language difficulties, including those with a hearing impairment, may need support to access this type of task. Please consult the relevant section in the 'Non-Statutory Guidance: Using Assessment Tasks for Pupils with Special Educational Needs (Primary)'.

Pupils should be given the opportunity to:

Plan

- talk about farming and farm animals;
- use language associated with sorting and making patterns;

Do

- count and record the correct number of animals;
- match objects to find out which set has more;
- sort animal pictures for 1 criterion and re-sort for a different criterion;
- continue the animal patterns;

Review

- talk about how they sorted the animal pictures;
- talk about how they found out which set has more bales; and
- talk about their animal patterns.

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Assessing Pupils' Responses to the Task

This page sets out the Requirements for Using Mathematics that are covered in this task. Alongside these are the Progression Statements related to this task and evidence of achievement that illustrates the standard at Level 1.

Requirements for Using Mathematics	Progression Statements for Level 1	Evidence
<p>Across the curriculum, at the level appropriate to their ability, pupils should be enabled to:</p>	<p>In structured activities, in familiar and accessible contexts, pupils can:</p>	<p>Evidence that illustrates the standard at Level 1 may include the ability to:</p>
<ul style="list-style-type: none"> choose the appropriate materials, equipment and mathematics in a particular situation; 	<ul style="list-style-type: none"> talk about and use the materials and equipment provided to carry out an activity; 	<ul style="list-style-type: none"> talk about the different pictures that have been provided, for example rabbit, sheep, pig, cow; use the tree diagram provided to sort the animals for one criterion; use pictures/farm animals to continue a pattern;
<ul style="list-style-type: none"> use mathematical knowledge and concepts accurately; work systematically and check their work; <p>using their Knowledge and Understanding of Number:</p>	<ul style="list-style-type: none"> use some mathematical notation; show some organisation in their practical work; use, estimate, add and subtract numbers up to at least 10; 	<ul style="list-style-type: none"> count animals up to 10, for example 8 pigs; match objects to find which set has more bales; count the animals and record results;
<ul style="list-style-type: none"> explore ideas, make and test predictions and think creatively; <p>using their Knowledge and Understanding of Number:</p>	<ul style="list-style-type: none"> look for and talk about patterns; create and describe repeating patterns using objects, numbers or pictures; 	<ul style="list-style-type: none"> continue the animal patterns, for example rabbit, pig, rabbit, pig etc;
<ul style="list-style-type: none"> use mathematical understanding and language to ask and answer questions, talk about and discuss ideas and explain ways of working; <p>using their Knowledge and Understanding of Handling Data:</p>	<ul style="list-style-type: none"> use appropriate mathematical language to respond to questions about their work; sort and classify real objects for one criterion and re-sort for a different criterion using Venn, Carroll and Tree diagrams. 	<ul style="list-style-type: none"> use everyday language relevant to the activity to respond to questions and talk about their work, for example, "Why have you put the pig here?" or "What animal will come next in the pattern?"; sort a collection of farm animals into pig and not pig and then re-sort for a different criterion e.g. two legs and not two legs.

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Answers

Part A

Five rabbits

Seven sheep

Ten hens

Eight pigs

Part B

Children identify that there are more small bales.

Part C

Children should be to explain how they sorted the animal pictures, for example pigs/not pigs, hens/not hens, babies/not babies, two legs/not two legs.

Part D

Pictures should be placed on the grid in this order:

Pattern 1: sheep, hen

Pattern 2: rabbit, pig, rabbit, pig

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Teacher Prompt Sheet

Part A:

Children are provided with Resource 1

Instruct the pupils as follows:

'Farmer Joe is very busy. He would like you to count all the animals in his fields. Can you count them correctly and write the answer in the box?'

Part B:

Teacher will have five big yellow cubes and nine small yellow cubes. Teacher uses Resource 2 to record pupil responses.

Instruct the pupils as follows:

Teacher sets the scene by saying, 'Farmer Joe has been very busy making some bales of hay but he is a bit forgetful. He is not sure if he has more big bales of hay (point to the five big yellow cubes) or more of these small bales of hay (point to the nine small yellow cubes).'

Teacher asks questions such as...

'Can you help him?'

'What will you do to find out?'

'Which set has more?'

'Show me how you can be really sure.'

Part C:

Pupils are provided with two Tree diagrams - (one with labels and one without labels as shown on the Teacher Resource) and cut up pictures of farm animals (Resource 3). (Teachers can enlarge the Teacher Resource Tree diagrams or create their own if preferred). Teacher uses Resource 2 to record pupil responses.

Instruct the pupils as follows:

Teacher sets the scene, for example 'Look at Farmer Joe's animals. They are all mixed up. Can you help Farmer Joe sort them out?', 'Can you sort them into pigs and not pigs?'

Teacher asks, 'Can you tell me why this animal goes in here/does not go in here?'

'Now can you sort them in a different way?' Discuss the new sort. 'Tell me how you have sorted Farmer Joe's animals this time?'

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Part D:

Children are provided with a copy of Resource 3 and the cut out pictures of sheep, cow, rabbit and pig from Resource 4 (or appropriate plastic farm animals).

Instruct each pair/group as follows:

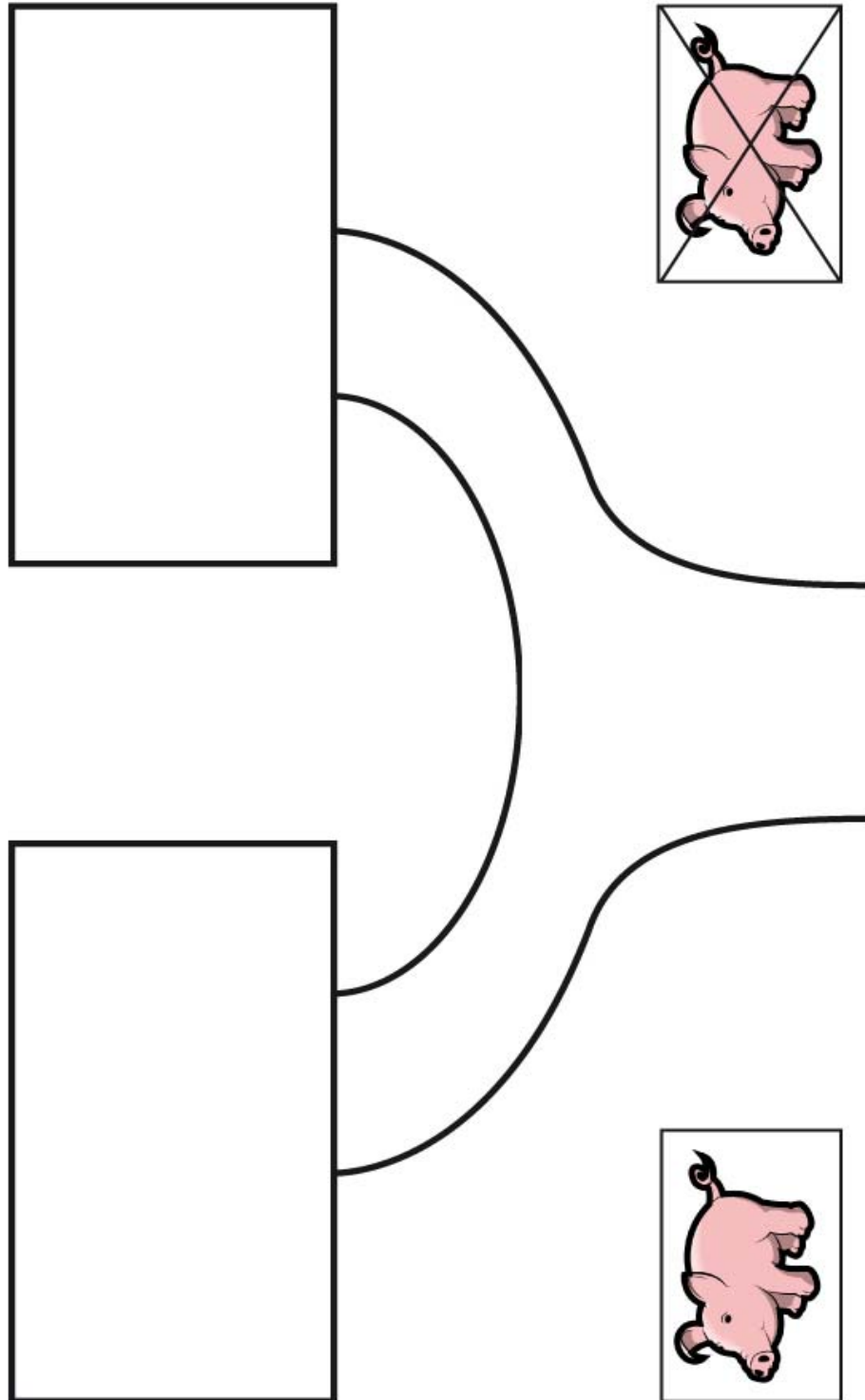
Teacher sets the scene, 'Farmer Joe wants to take all his animals home. He has already put four animals in their sheds - the sheep, the hen, the sheep and the hen (the teacher points to each picture.) Can you look carefully at the other pictures and continue the pattern?'

'Now this time we have two pictures – rabbit and pig. Can you continue this pattern as well?'

Discuss.

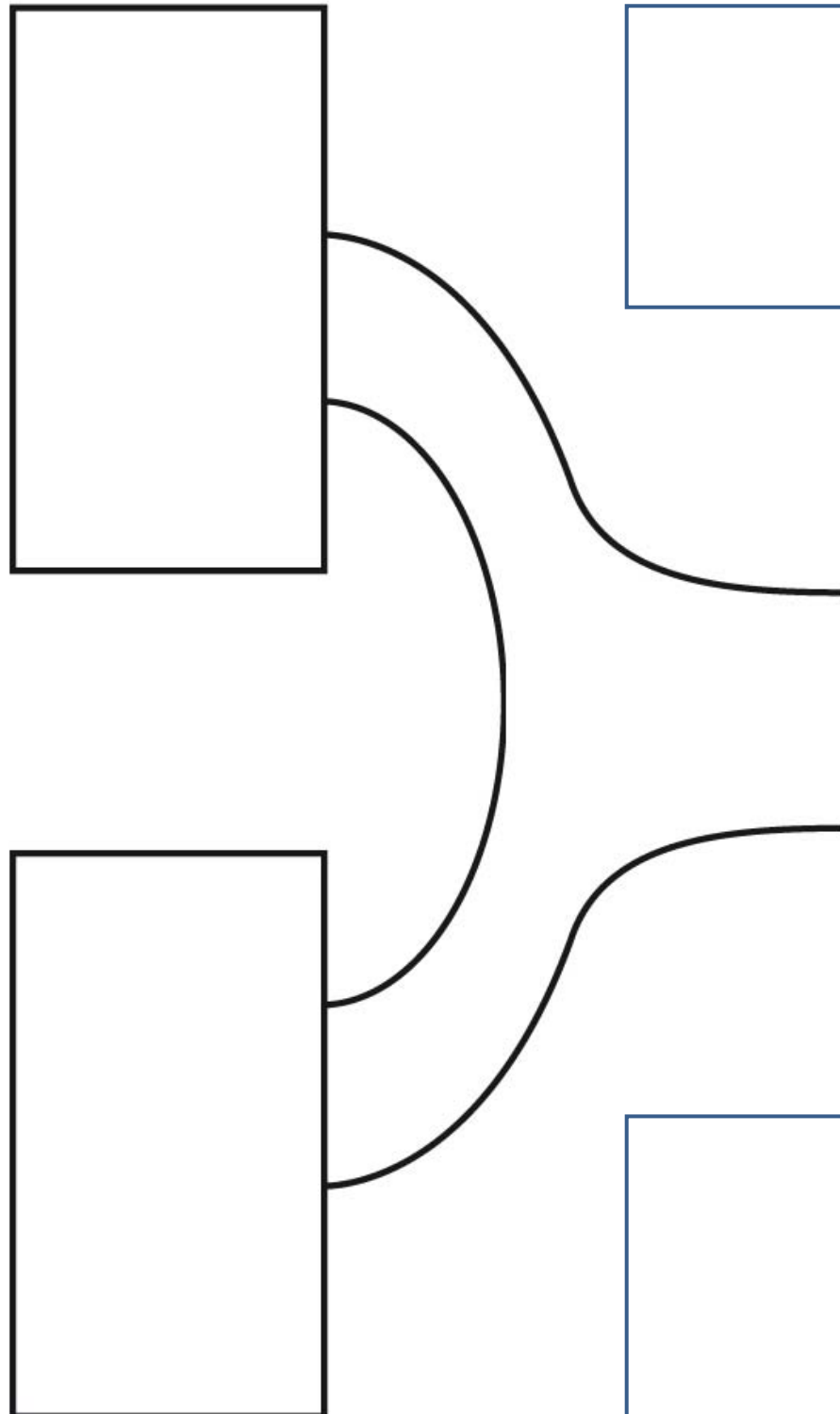
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Teacher Resource
Tree Diagram



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Teacher Resource
Tree Diagram

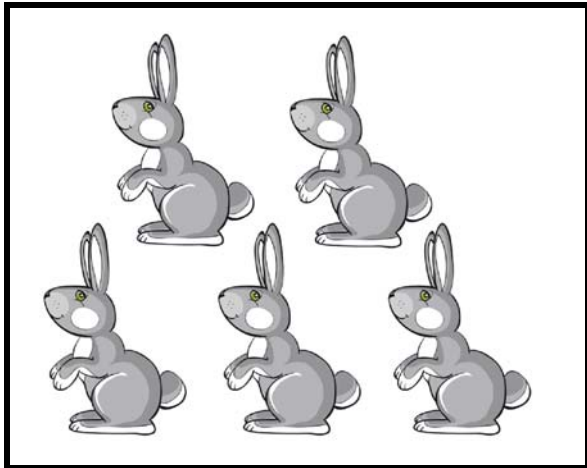


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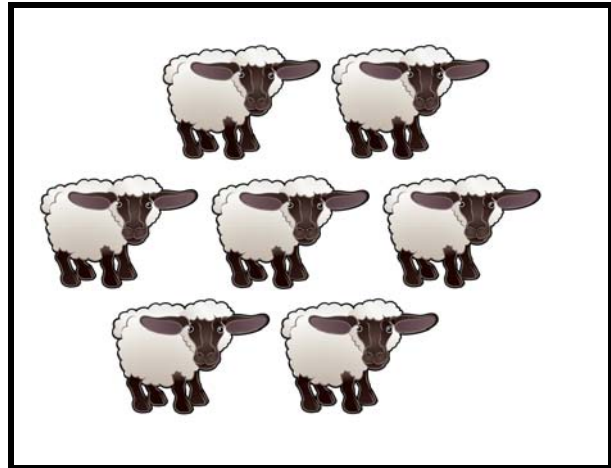
Resource 1

Part A

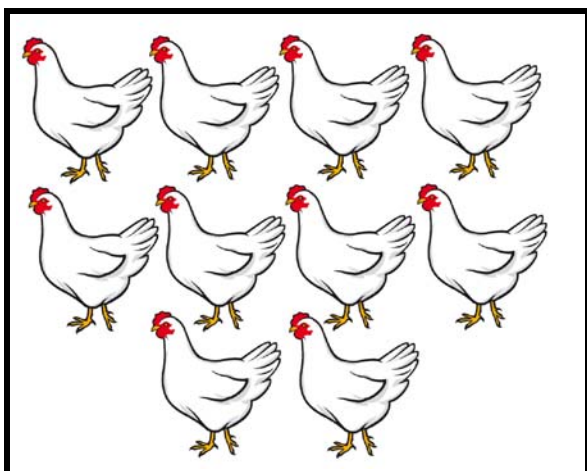
Can you help Farmer Joe count his animals?



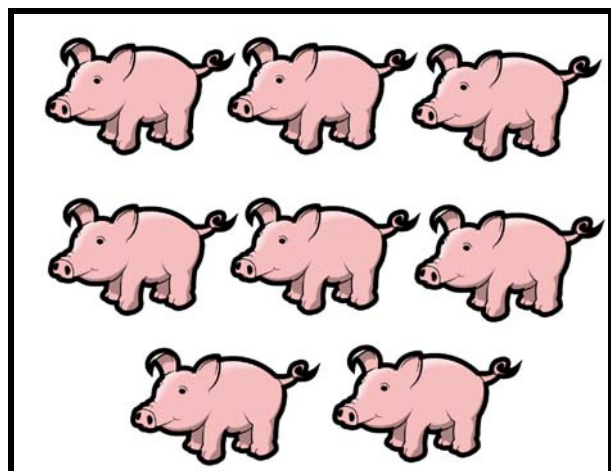
rabbits



sheep



hens



pigs

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Resource 2

Teacher Record Sheet

Record of Pupil Responses

Name of Pupil _____

Part B:

Pupil can:	Tick	Pupil response/other observation
Accurately identify the set which has more		
Talk about how they found out		

Part C:

Pupil can:	Tick	Pupil response/other observation
Appropriately sort the animal pictures into pig and not pig		
Explain why they sorted the animals as they did		
Suggest an alternative way to sort and carry this out correctly		
Explain why they sorted the animals as they did		
Correctly identify which animal picture was placed in the wrong set		
Give reasons why it was in the wrong set		

Part D:

Pupil can:	Tick	Pupil response/other observation
Appropriately continue the pattern sheep, hen		
Talk about their pattern		
Appropriately continue the pattern rabbit, pig, rabbit, pig		
Talk about their pattern		

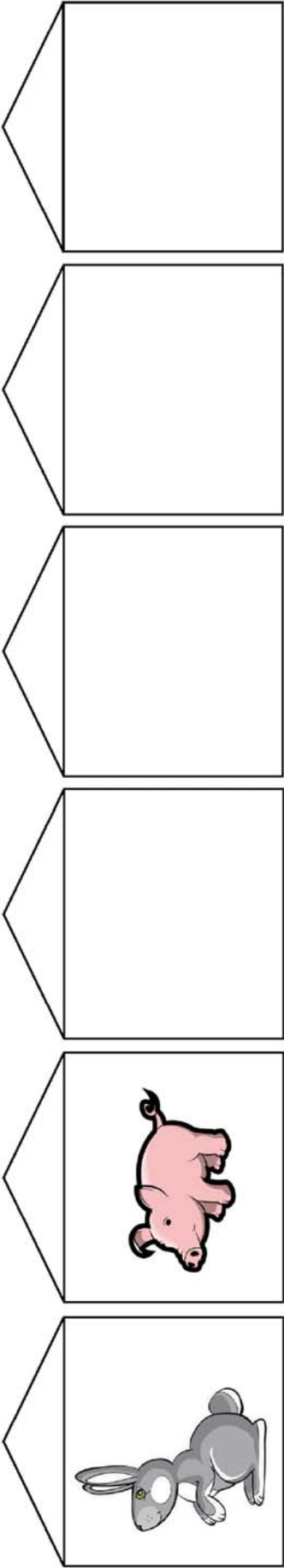
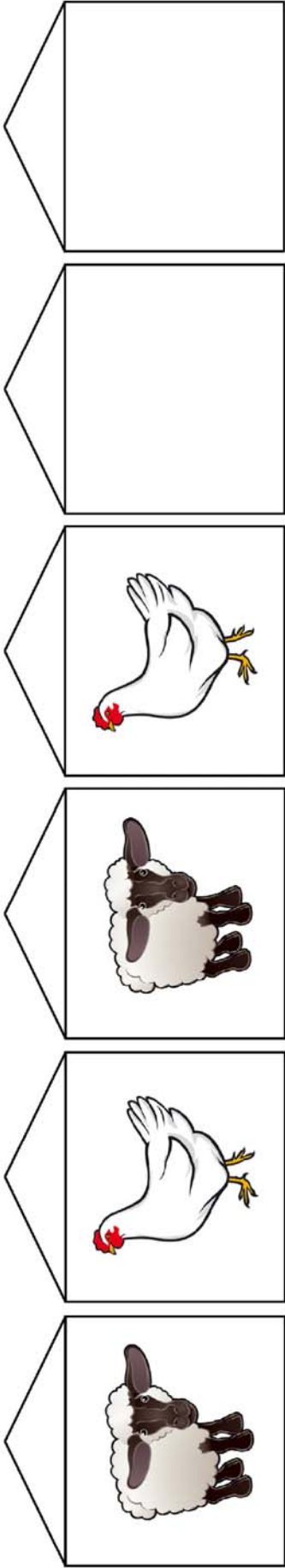
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Resource 3

Can you continue the patterns?

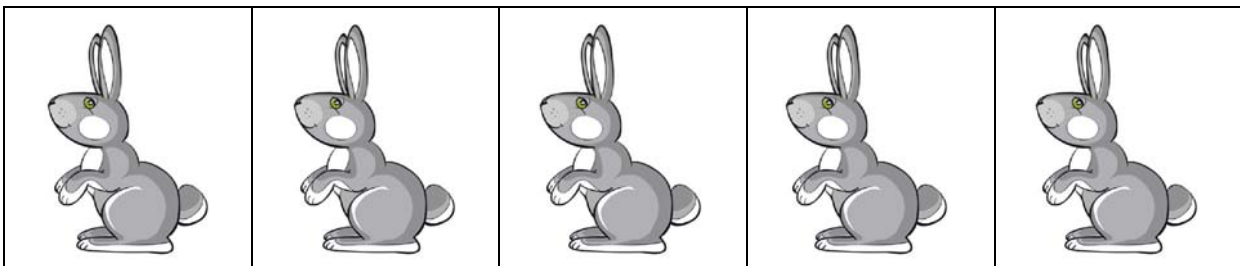
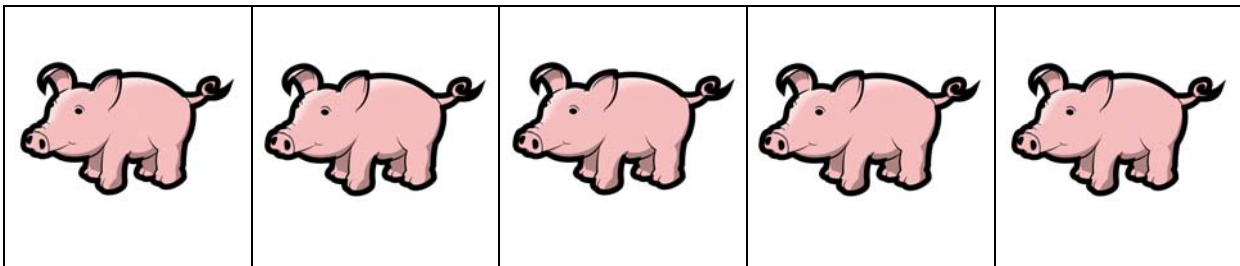
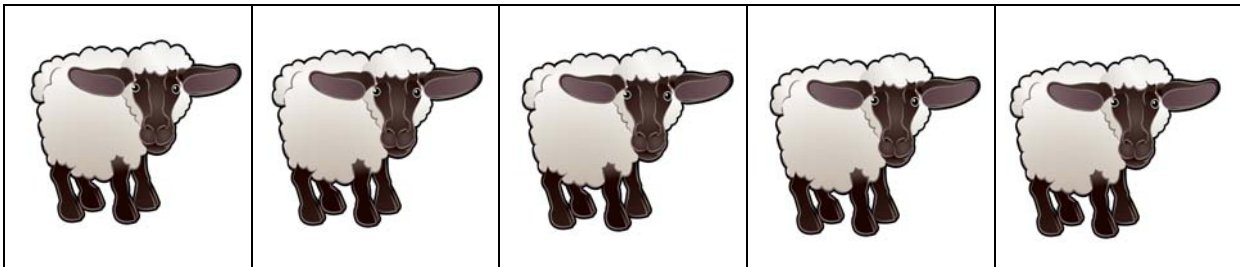
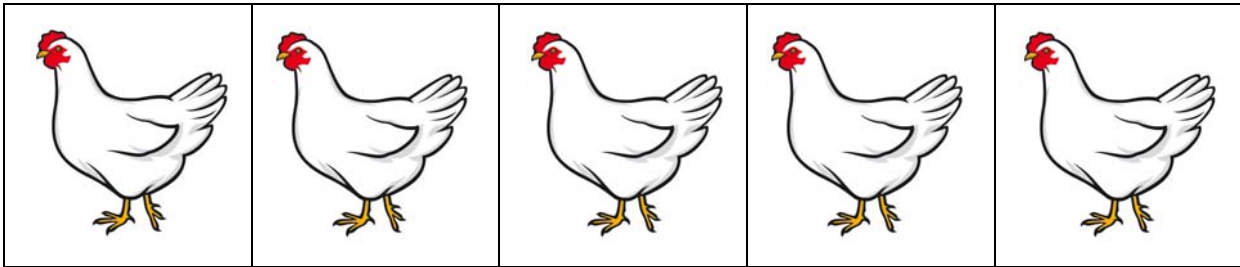


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Resource 4



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Rabbit and sheep: *Hemera/Thinkstock*