

Reasoning and Problem Solving

Fractions Consolidation – Year 3

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 Summer Block 1 Fractions.

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

Equivalent Fractions
Compare Fractions
Order Fractions
Add Fractions
Subtract Fractions

National Curriculum Objectives

Mathematics Year 3: (3F1c) [Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators](#)

Mathematics Year 3: (3F2) [Recognise and show, using diagrams, equivalent fractions with small denominators](#)

Mathematics Year 3: (3F3) [Compare and order unit fractions, and fractions with the same denominators](#)

Mathematics Year 3: (3F4) [Add and subtract fractions with the same denominator within one whole \[for example, \$\frac{5}{7} + \frac{1}{7} = \frac{6}{7}\$ \]](#)

Mathematics Year 3: (3F10) [Solve problems that involve 3F1 - 3F4](#)

Did you like this resource? Don't forget to [review](#) it on our website.

Farmer Fred lives on his farm with all his farm animals.

He has many jobs to do every single day.

He is a fantastic farmer but unfortunately, he is not very good at maths.

He is going to need your help, I hope you have your fractions brain with you.

Today is going to be a busy day on the farm.



1a. Farmer Fred has divided his field up equally into 8 parts.

Use the key to colour the square or squares to match how much space each animal needs.

Animal	Fraction	Colour to shade
Chickens	$\frac{1}{8}$	Red
Pigs	$\frac{1}{4}$	Blue
Sheep	$\frac{1}{2}$	Green
Horse	$\frac{1}{8}$	Orange

1b. The goats need to have the same amount of field as the pigs.
Circle all the fractions that are equivalent to $\frac{1}{4}$.



$$\frac{2}{4}$$

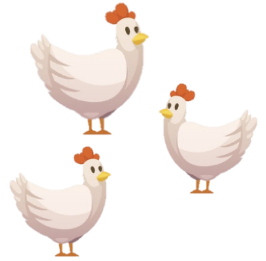
$$\frac{4}{16}$$

$$\frac{1}{2}$$

$$\frac{4}{8}$$

$$\frac{2}{8}$$

1c. Farmer Fred has 50 animals in total on his farm. 25 of his animals are chickens. Circle the equivalent fraction?



$$\frac{1}{3}$$

$$\frac{2}{12}$$

$$\frac{1}{2}$$

$$\frac{20}{50}$$

$$\frac{25}{40}$$

Farmer Fred is feeding his animals. Some of the animals share the same type of food.

2a. Compare the fractions of food each animal is having from the bag.
Insert the correct symbol ($>$ $<$ or $=$) between the fractions.

$$\frac{1}{3}$$



$$\frac{1}{5}$$

Ducks

$$\frac{1}{4}$$



$$\frac{3}{4}$$

Goats

$$\frac{2}{3}$$



$$\frac{4}{6}$$

Donkeys

2b. Farmer Fred has two 1kg boxes of feed left for the cows. Box 1 has $\frac{1}{2}$ of the food left in and box 2 has $\frac{1}{3}$ left.



I am going to use the box with $\frac{1}{3}$ of the food left in first because that one has the most food left.



Is Farmer Fred correct? Explain.

Farmer Fred is putting a fence around his field. He has 5 pieces of fence panel that he needs to put in order before he starts.

3a. Put these fence panels in ascending order according to size.

$$\frac{2}{8}$$

A

$$\frac{7}{8}$$

B

$$\frac{5}{8}$$

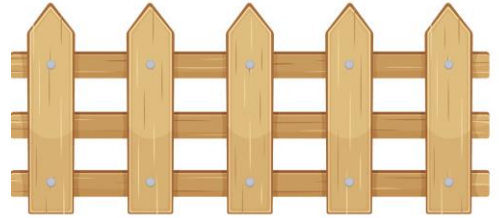
C

$$\frac{8}{8}$$

D

$$\frac{4}{8}$$

E



3b. Farmer Fred says that if the denominator is the same, then the bigger the numerator the bigger the fraction. Is he correct?

Farmer Fred is counting up the animals before he puts them to bed.

4a. He starts with the chickens. $\frac{2}{7}$ of the chickens are in the coupe. $\frac{3}{7}$ go inside whilst Fred is counting.

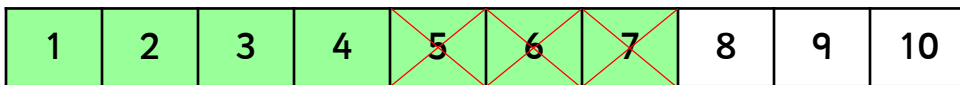
What fraction of the chickens are now inside the coupe?

4b. Farmer Fred counts up all his sheep, there are 20 sheep altogether. In field 1 there are $\frac{3}{20}$. In field 2 there are $\frac{8}{20}$. What fraction are in field 3?

5a. Farmer Fred is counting the pigs in the pigsty. He has drawn a model to help him count them.



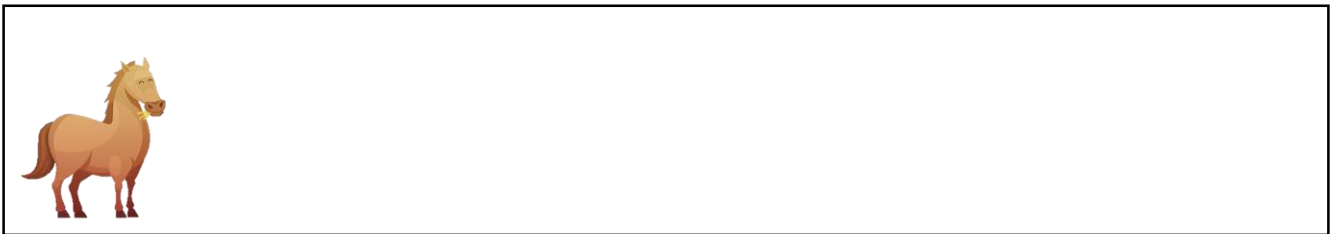
$\frac{7}{10}$ of the pigs are in the sty. 3 of the pigs go back outside. Fill in the gaps in the number sentence to show what fraction are left in the sty.



$$\frac{\boxed{7}}{\boxed{10}} - \frac{\boxed{}}{\boxed{}} = \frac{\boxed{}}{\boxed{}}$$



5b. Before Farmer Fred finishes for the day he needs to put hay into each of the stables. $\frac{10}{18}$ of the stables need hay. He has put hay into $\frac{6}{18}$ of the stables. What fraction of the stables still need hay?

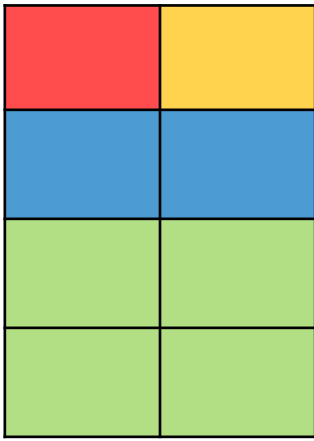


5c. Farmer Fred has got a bit confused. He says that if $\frac{10}{18}$ need hay then half of the stables don't need hay. Is he correct? Explain.



Reasoning and Problem Solving – Fractions – Year 3

1a.



Accept colours in any order just as long as they represent the correct amount.

1b.

$$\frac{2}{4} \quad \frac{4}{16} \quad \frac{1}{2} \quad \frac{4}{8} \quad \frac{2}{8}$$

1c.

$$\frac{1}{3} \quad \frac{2}{12} \quad \frac{1}{2} \quad \frac{20}{50} \quad \frac{25}{40}$$

2a.

$$\frac{1}{3} > \frac{1}{5} \quad \frac{1}{4} < \frac{3}{4} \quad \frac{2}{3} = \frac{4}{6}$$

Chickens Ducks Sheep Goats Horse Donkeys

2b. No Farmer Fred is not correct. $\frac{1}{3}$ is smaller than $\frac{1}{2}$.

3a. A, E, C, B and D.

3b. Yes Farmer Fred is correct. If the denominator is the same then the bigger the numerator the bigger the fraction.

4a. $\frac{5}{7}$

4b. $\frac{9}{20}$

5a. $\frac{7}{10} - \frac{3}{10} = \frac{4}{10}$

5b. $\frac{4}{18}$

5c. He is not correct. $\frac{8}{18}$ of the stables do not need hay. $\frac{8}{18}$ is not equivalent to $\frac{1}{2}$.