

Maths - Week Starting 20/04 – 8.3A and 8.3B

Lesson 1

Last week you looked at ratio and this week you are going to looking at proportion and see that this is linked to ratio. Look at the worksheet for lesson 1 and the first question.

In the picture you will see 6 black balls and 2 white balls. Therefore there are 8 balls altogether. To find the proportion that are black we can write a fraction $\frac{6}{8}$ because there are 6 black out of a total of 8. This simplifies as $\frac{3}{4}$. We also know that this is the same as 75%.

We could also write the proportion of black as 0.75, as a decimal.

The ratio of black to white is 6:2 and this simplifies to 3:1.

You can print the worksheet if you can or copy into your books. Complete the worksheet and I will email answers later.

Lesson 2

It is important that you can convert fractions into decimals and percentages. You did a lot of work on this in year 7 but to remind you I want you to do an activity on MyMaths. It is set as homework but do it now but it is important that you work through the lesson first.

Try to get 100%; you can do the task as many times as needed.

Lesson 3

I want you to do all the questions on the Proportion worksheet.

The starter questions are practice from lesson 2.

The main questions follow on from lesson 1, writing proportions as a fraction, decimal or percentage.

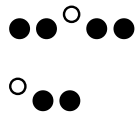
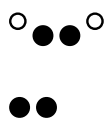
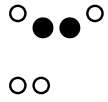
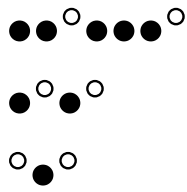
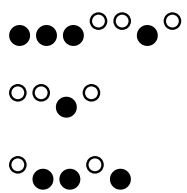
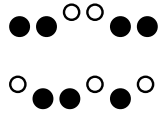
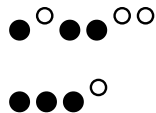
I will send answers later.

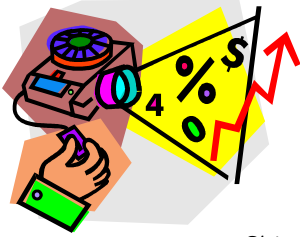
If you are able to complete the star questions please send them to me.

Good luck and have a great week.

Worksheet for Lesson 1

Complete the table below, the first problem has been completed for you.

Mixture	Proportion as a fraction reduced to its simplest form	Proportion as a percentage	Proportion as a ratio reduced to its simplest form
	Proportion of black is $\frac{3}{4}$	Proportion of black is 75%	Proportion of black as a ratio to white is 3:1
	Proportion of black is .	Proportion of black is %	Proportion of black as a ratio to white is :.
	Proportion of black is .	Proportion of black is %	Proportion of black as a ratio to white is :.
	Proportion of black is .	Proportion of black is %	Proportion of black as a ratio to white is :.
	Proportion of black is .	Proportion of black is %	Proportion of black as a ratio to white is :.
	Proportion of black is .	Proportion of black is %	Proportion of black as a ratio to white is :.
	Proportion of black is .	Proportion of black is %	Proportion of black as a ratio to white is :.



Proportion

Objective: to be able to express the proportion of an amount as a fraction, decimal or percentage

Starter questions

A

Turn these fractions to percentages:

1. $\frac{1}{2}$
2. $\frac{1}{4}$
3. $\frac{3}{4}$
4. $\frac{1}{10}$
5. $\frac{1}{100}$
6. $\frac{1}{5}$

B

Multiply these numbers by 100:

1. 23
2. 2.3
3. 0.23
4. 0.023

C

Simplify these fractions:

1. $\frac{4}{8}$
2. $\frac{9}{12}$
3. $\frac{15}{20}$
4. $\frac{36}{60}$
5. $\frac{18}{72}$

Main questions

1. If there are 20 balls in a bag and 10 are red, 5 are blue 4 are white and one is green.
 - a. Express the proportion of red balls in the bag as:
 - i. A fraction
 - ii. A decimal
 - iii. A percentage
 - b. Express the proportion of blue balls in the bag as:
 - i. A fraction
 - ii. A decimal
 - iii. A percentage
 - c. Express the proportion of white balls in the bag as:
 - i. A fraction
 - ii. A decimal
 - iii. A percentage
 - d. Express the proportion of green balls in the bag as:
 - i. A fraction
 - ii. A decimal
 - iii. A percentage
2. Add up all the percentage answers from part one, what do you notice? Why do you get this number?
3. There are 56 people at a meeting 14 are women,
 - a. What proportion of people at the meeting are women? Express your answer as a fraction, decimal and percentage.
 - b. What proportion of people at the meeting are men? Express your answer as a fraction, decimal and percentage.
4. Out of the 120 goals scored by a football team in a season 20 of them were headers,
 - a. What proportion of the goals were headers, express your answer as a fraction, decimal and percentage.
 - b. What proportion of the goals were not headers, express your answer as a fraction, decimal and percentage.
5. I have been late to work 90 times out of 270 working days this year.
 - a. What proportion of days have I been late? Express your answer as a fraction, decimal and percentage.
 - b. What proportion of days have I been on time? Express your answer as a fraction, decimal and percentage.
6. Can you see any links between your answers from parts a and b, from question 3,4 and 5

Star questions

Write 3 questions like 3,4 and 5, but..... these have to be the answers:

1. $\frac{3}{4}$, 75%, 0.75
2. $\frac{1}{5}$, 20%, 0.2
3. $\frac{1}{8}$, 12.5 % , 0.125