

NUMERACY

TITLE: Ratios, proportions and percentages

AGE GROUP: 7 - 8

DURATION: 30 – 45 minutes

LEARNING OUTCOME: L03

KEY CONCEPTS:

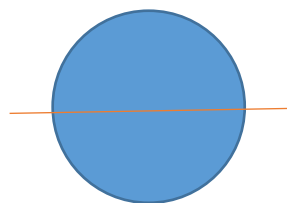
Facilitators can begin this session with a conversation about the key words helping learners to visualise the relationship between wholes and parts. They need to understand the role numbers play in helping us measure relative size. It will be great if they come to realise the similarity between a ratio and a percentage.

Learners will apply the concept of percentage to create a pie chart and use it to show the comparative size of parts that make up a whole. Being able to use Microsoft Excel or similar spreadsheet facility to complete these graphing tasks will be a useful skill.

KEY WORDS:

Ratio
Percentage
Pie chart
Cost

Example: Divide a circle into two equal parts



The value of each half is:

$$\frac{1}{2} \times 100 = 100/2 = 50\% = 0.5$$

MATERIALS NEEDED:

1. Writing materials – pen, pencil, paper
2. Microsoft Excel

Activity One

Draw a circle. The whole of the circle has a value that is equal to 100%.

You will be dividing the whole circle into the following equal parts 2, 4, 6, 8 and 10. As you divide the circle each time, answer the question below.

What will be the value in percentage of each part?

- After we have divided the circle into two equal parts, each part will have a value of...
- After we have divided the circle into four equal parts, each part will have a value of...
- After we have divided the circle into six equal parts, each part will have a value of...
- After we have divided the circle into eight equal parts, each part will have a value of...
- After we have divided the circle into ten equal parts, each part will have a value of...

Activity 2

Ezra earned £2,000 from work last month. He spent 50% of the money on rent, 20% on food, 10% on utilities and saved the rest.

1. Draw a pie chart that shows how Ezra used his money last month.
2. What was the actual amount of money he spent on rent, food, utilities and savings?

WORKSHEET



Activity one

Whole	Parts	Fraction	Percentage
1	1		
1	2		
1	4		
1	6		
1	8		
1	10		

Activity two

Earned		£2,000
Rent	50%	
Food	20%	
Utilities	10%	
Savings		
Total	100%	