

Pie charts
by Adrian Tennant

Level: Elementary / pre-intermediate
Topic: Pie charts
Subject: Maths
Target age: Teenagers / adults
Time (approx): Activity 1: 5 minutes. Activity 2: 5-10 minutes Activity 3: 10 minutes Activity 4: 10-15 minutes
Preparation: One photocopy for each student for all activities. Note: You might want to put the answer keys onto an OHT to show to students.

Procedure

Activity 1

- 1 Read out the definition of pie charts with your students.
- 2 Put students in pairs and ask them to look at the three graphs and decide which one is a pie chart.
- 3 Check as a class.

Key: b is the right answer. (a is a column or bar chart and c is a line chart.)

Activity 2

- 1 Ask students to look at the data.
- 2 Check they understand what the information means and ask them to think about what the pie chart might look like.
- 3 Put students in pairs and ask them to look at the four pie charts.
- 4 Get them to choose the chart they think represents/shows the data and encourage them to try and explain why.
- 5 Ask a few students what they think the correct answer is.

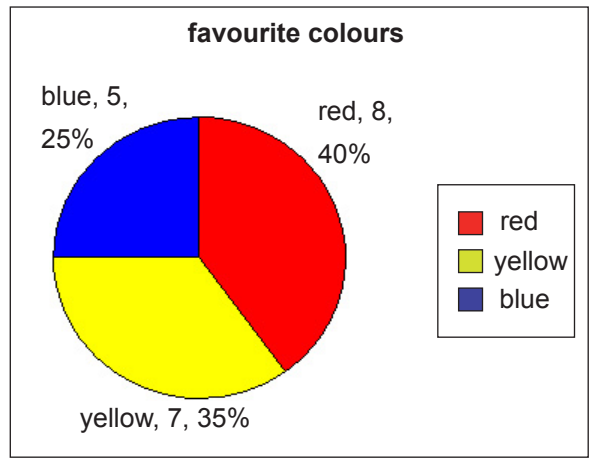
Key: c

Activity 3

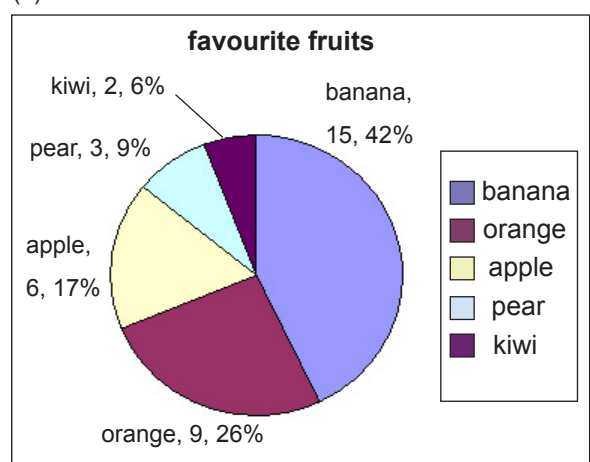
- 1 Put students in pairs and have them look at the two pie charts and the data.
- 2 Explain that you want them to label the segments of each pie chart with the correct information.
- 3 If necessary, do the first segment of the top pie chart together, i.e. red – 8 people, 40%
- 4 Get students to complete the task with their partner.
- 5 Monitor and help where necessary.
- 6 Pair the pairs so students are working in groups of 4 and get them to check their answers together.
- 7 Check as a class.

Key:

(1)



(2)



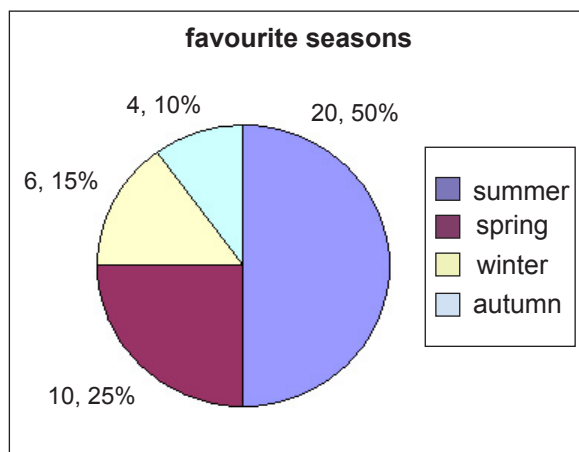
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Activity 4

- 1 Have students read the information box and then check they understand it.
- 2 Put students in pairs and ask them to read the data.
- 3 Ask them to work together and draw the pie chart to show / illustrate the data.
- 4 Monitor and help where necessary.
- 5 Pair the pairs so students are working in groups of 4 and get them to check their answers together.
- 6 Check as a class.

Key:



Useful websites

Four web pages that look at pie charts. Starting with the easiest and most basic up to the most complicated of the four.

www.bbc.co.uk/schools/gcsebitesize/geography/geogskills/geogskillsgraphsrev3.shtml

www.subtangent.com/maths/piecharts.php

www.bbc.co.uk/education/asguru/generalstudies/maths/14statisticsprobability/statsprob04.shtml

www.bbc.co.uk/schools/gcsebitesize/maths/datahandlingih/piechartsirev1.shtml

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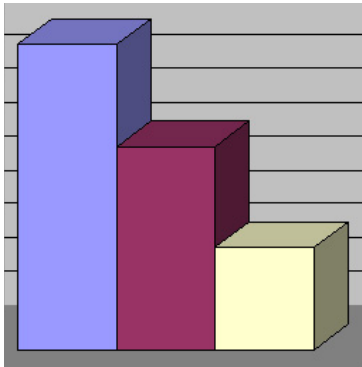
Activity 1

Read the definition of a pie chart.

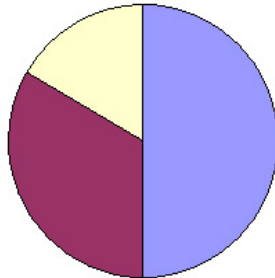
Pie chart *noun* [c] a circle divided into sections to show how something is divided into different amounts.

Look at these charts and graphs. Which one is a pie chart: a, b or c?

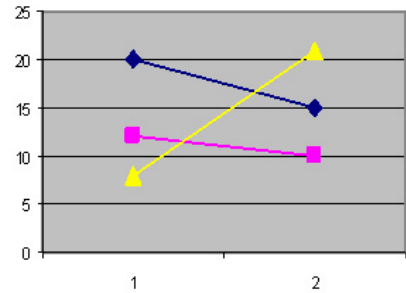
a)



b)



c)

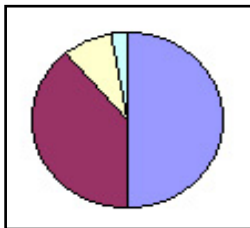


Activity 2

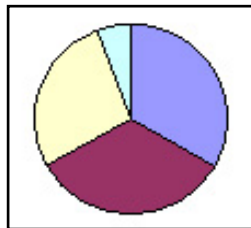
Which pie chart shows this data?

Data
36 people were interviewed about their favourite type of music. Here are the results:
Rock & Pop 19
Classical music 8
Jazz & Blues 5
Folk 4

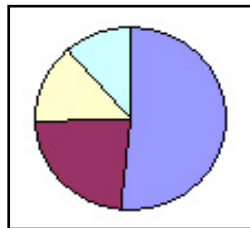
a)



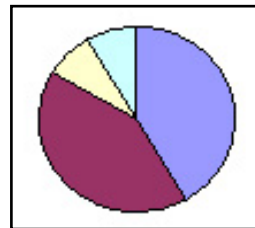
b)



c)



d)



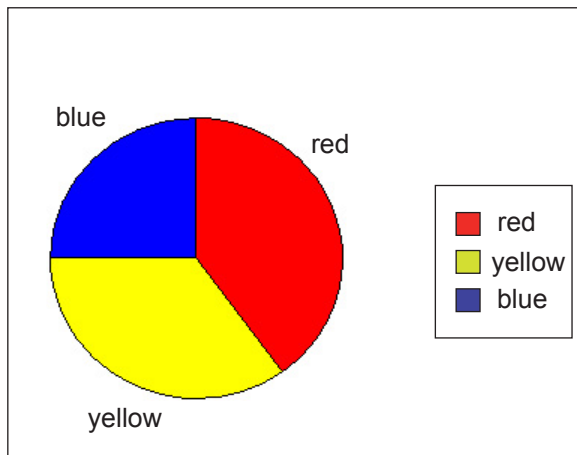
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Activity 3

Complete these pie charts with the figures and percentages. In each pie chart, one figure and one percentage is missing: calculate the correct answers and add them to the chart.

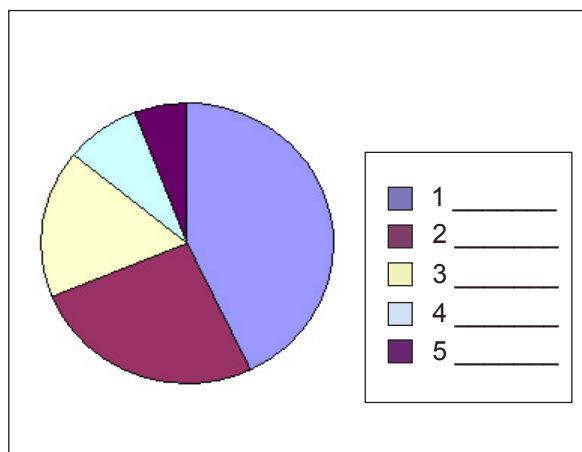
Pie chart 1: 20 people asked about their favourite colour.

8 people (40%) – red, ___ people (35%) – yellow, 5 people (___%) – blue



Pie chart 2: 35 people asked about their favourite fruit.

15 people (42%) – banana, ___ people (26%) – orange, 6 people (___%) – apple, 3 people (9%) – pear, 2 people (6%) – kiwi



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Read this information box about pie charts.

Pie charts usually start with the biggest piece first. Think of the circle as a clock with 12 o'clock at the top. Start from there with the other pieces in order of size.

Now using this data, draw a pie chart.

40 people were asked about their favourite season of the year.

20 (50%) said summer

10 (25%) said spring

6 (15%) said winter

4 (10%) said autumn

