Homework/Extension
Step 6: Pie Charts with Percentages

National Curriculum Objectives:

Mathematics Year 6: (6S1) Interpret and construct pie charts and line graphs and use these to solve problems

Differentiation:

Questions 1, 4 and 7 (Varied Fluency)
Developing Decide if a given statement is true or false, using data from a pie chart. 4 sets of data with multiples of 10%.
Expected Decide if a given statement is true or false, using data from a pie chart. 5 sets of data with multiples of 5%.
Greater Depth Decide if a given statement is true or false, using data from a pie chart. Two pie charts with 5 sets of data each, with any percentage.

Questions 2, 5 and 8 (Varied Fluency)
Developing Identify which child has interpreted the data from a pie chart correctly. 5 sets of data with multiples of 10%.
Expected Identify which child has interpreted the data from a pie chart correctly. 5 sets of data with multiples of 5%.
Greater Depth Identify which child has interpreted the data from a pie chart correctly. Two pie charts with 5 sets of data each, with any percentage.

Questions 3, 6 and 9 (Reasoning and Problem Solving)
Developing Fill in a missing percentage on a pie chart and use this and use this with other given information to calculate the number of children. 5 sets of data with multiples of 10%.
Expected Fill in a missing percentage on a pie chart and use this with other given information to calculate the number of children. 5 sets of data with multiples of 5%.
Greater Depth Fill in a missing percentage on each pie chart and use this and use this with other given information to calculate the number of children. Two pie charts with 5 sets of data each, with any percentage.
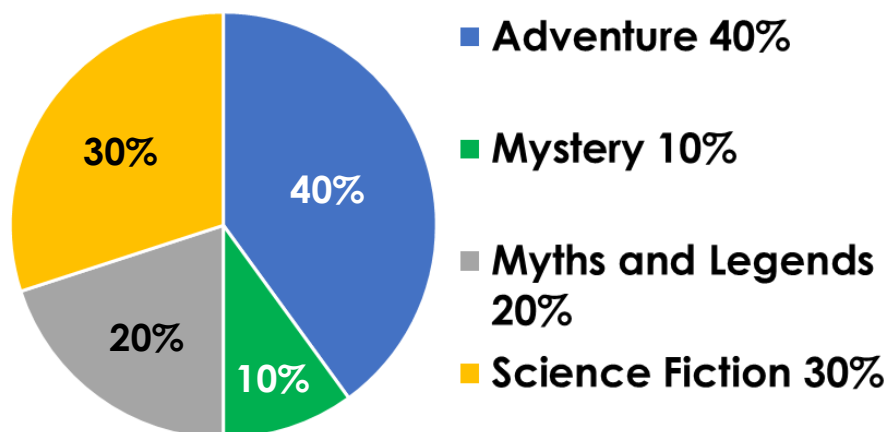
More Year 6 Statistics resources.

Did you like this resource? Don't forget to review it on our website.

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Pie Charts with Percentages

1. True or false? Out of the 200 children that voted, 15 more children liked science fiction than myths and legends.

Types of Fiction

- ■ **Adventure 40%**
- ■ **Mystery 10%**
- ■ **Myths and Legends 20%**
- ■ **Science Fiction 30%**

40%

30%

20%

10%

2. 120 children voted for their favourite type of TV programme. Who is correct?
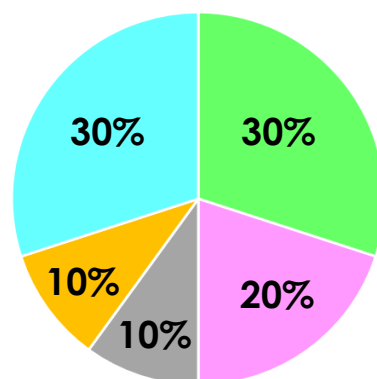
Lydia

25 children voted for drama.

36 children voted for sports.

Haroon

Types of TV programme

- ■ Sports 30%
- ■ Drama 20%
- ■ News 10%
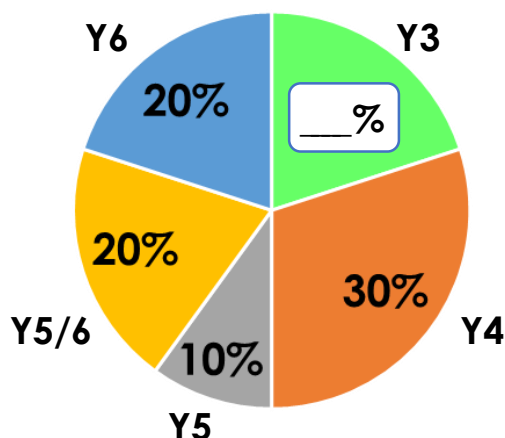- ■ Talk Show 10%
- ■ Comedy 30%

30%   30%

10%   10%   20%

3. There are 200 pupils in Key Stage 2. Fill in the missing percentage and work out how many children are in Year 3.

Pupils in Key Stage 2

Number of pupils in Year 3 = _____

Y6 20%   **Y3** ___%

Y5/6 20%   **Y4** 30%

Y5 10%

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Homework/Extension – Pie Charts with Percentages – Year 6 Developing

Pie Charts with Percentages

4. True or false? Out of the 200 children that voted, 15 more children liked science fiction than myths and legends.

Types of Fiction

- ■ Adventure 45%
- ■ Mystery 5%
- ■ Myths and Legends 20%
- ■ Science Fiction 25%
- ■ Ghost 5%
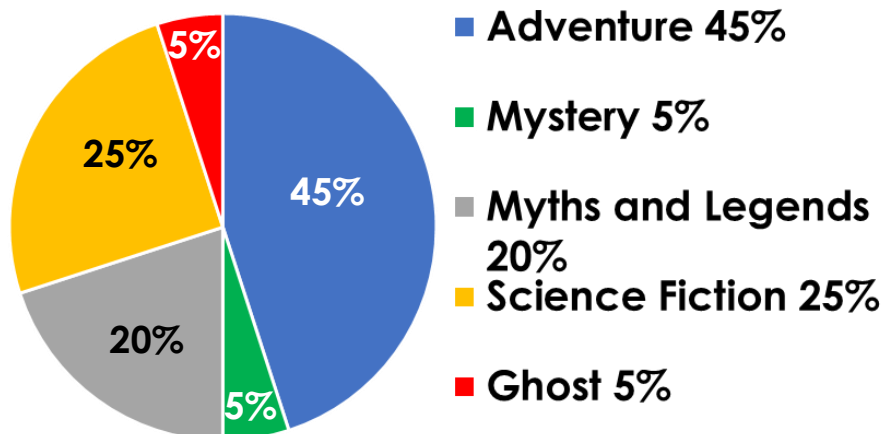
VF
HW/Ext

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5. 120 children voted for their favourite type of TV programme. Who is correct?

Cheng: **25 children voted for comedy.**

Nadia: **42 children voted for sports.**

Types of TV programme

- ■ Sports 35%
- ■ Drama 25%
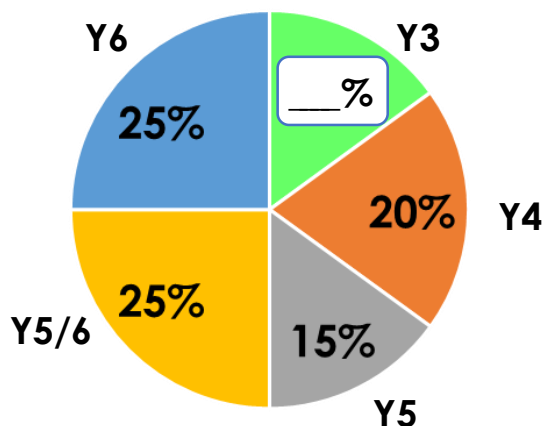- ■ Comedy 20%
- ■ Talk Shows 15%
- ■ News 5%
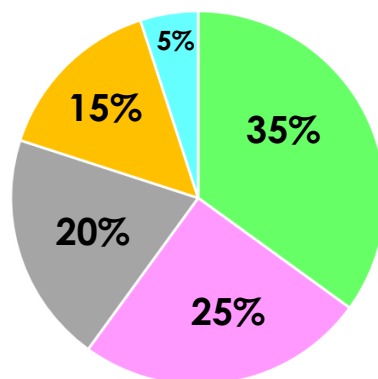
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HW/Ext

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6. There are 180 pupils in Key Stage 2. Fill in the missing percentage and work out how many children are in Year 3.

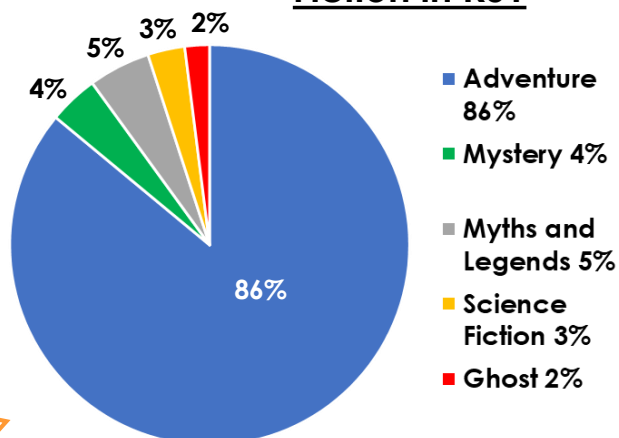## Pupils in Key Stage 2

Number of pupils in Year 3 = _____

Y6 — 25%
Y3 — ___%
Y4 — 20%
Y5 — 15%
Y5/6 — 25%

RPS
HW/Ext

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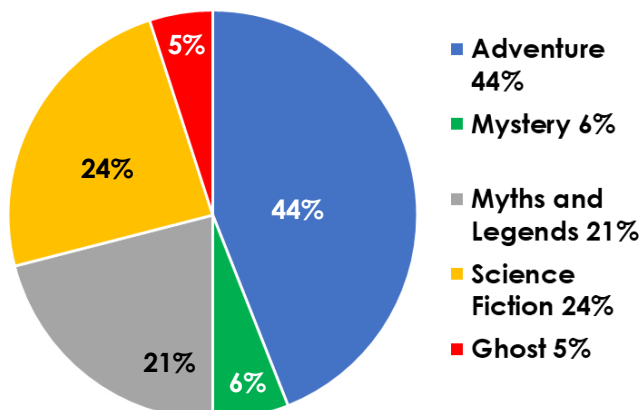**Homework/Extension – Pie Charts with Percentages – Year 6 Expected**

Pie Charts with Percentages

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7. True or false? 30 more KS2 children liked myths and legends than KS1 children. There are 200 children in each Key Stage.

Fiction in KS1

5% 4% 3% 2%

86%

- ■ Adventure 86%
- ■ Mystery 4%
- ■ Myths and Legends 5%
- ■ Science Fiction 3%
- ■ Ghost 2%

Fiction in KS2

5%
24%
44%
21%
6%

- ■ Adventure 44%
- ■ Mystery 6%
- ■ Myths and Legends 21%
- ■ Science Fiction 24%
- ■ Ghost 5%

VF
HW/Ext

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8. 400 children in each age group voted for their favourite type of TV programme. Who is correct?

Javerea

> 409 children in total voted for comedy.

> 68 more senior children voted for sports than juniors.

Noah

Juniors

- ■ Sports 29%
- ■ Drama 11%
- ■ News 1%
- ■ Talk Show 3%
- ■ Comedy 56%

29%
56%
11%
3% 1%

Seniors

26%
46%
9%
8%
11%

- ■ Sports 46%
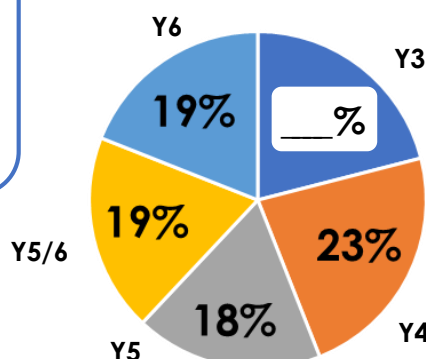- ■ Drama 11%
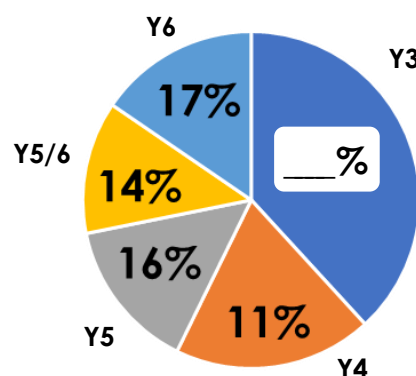- ■ News 8%
- ■ Talk Show 9%
- ■ Comedy 26%
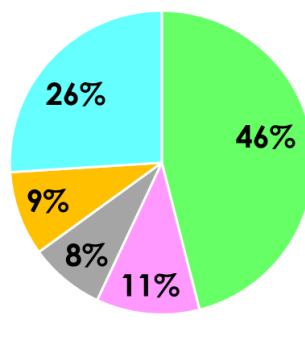
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HW/Ext

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9. At Hightown there are 400 pupils in KS2. There are a total of 180 pupils in Year 4 across both schools. Fill in the missing percentages and work out the total number of children in Year 3.

> Total number of pupils in Year 3 across both schools
> = _____

KS2 Pupils at Hightown

Y6
Y3
19%
___%
19%
23%
Y5/6
18%
Y5
Y4

KS2 Pupils at Newtown

Y6
Y3
17%
___%
14%
Y5/6
16%
11%
Y5
Y4

RPS
HW/Ext

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Homework/Extension – Pie Charts with Percentages – Year 6 Greater Depth

Developing
1. **False, 20 more children voted for science fiction than myths and legends.**
2. **Haroon is correct.**
3. **20%, 40 pupils in Year 3**

Expected
4. **False, 10 more children voted for science fiction than myths and legends.**
5. **Nadia is correct.**
6. **15%, 27 pupils in Year 3**

Greater Depth
7. **False, 32 more KS2 children like myths and legends than KS1**
8. **Noah is correct.**
9. **Hightown – 21%, Newtown – 42%; Hightown = 84 Y3 pupils, Newtown = 336 Y3 pupils = 420 Y3 pupils in total**

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Homework/Extension – Pie Charts with Percentages **ANSWERS**