Varied Fluency
Step 5: Read and Interpret Pie Charts

National Curriculum Objectives:

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

Differentiation:

Developing Questions to support reading and interpreting pie charts. Using halves, thirds, quarters and fifths, with numbers up to 100. Including up to 5 segments and up to 2 different denominators per chart.

Expected Questions to support reading and interpreting pie charts. Using halves, quarters, eighths, fifths, thirds and sixths, with numbers up to 1000. Including up to 6 segments and up to 3 different denominators per chart, where all denominators are direct multiples.

Greater Depth Questions to support reading and interpreting pie charts. Using any fraction, with numbers up to 1000. Including up to 6 segments and up to 4 different denominators per chart, where all denominators are not always direct multiples.

More Year 6 Statistics resources.

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

1a. What fraction of the pie chart represents people who chose squash?

Favourite Drink

■ Squash
■ Water

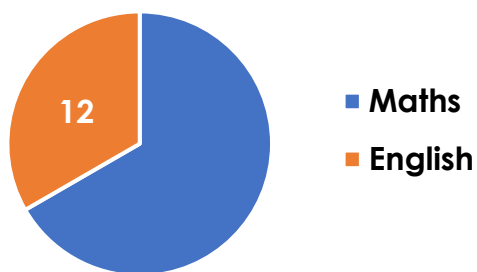1b. What fraction of the pie chart represents people who chose oranges?

Favourite Fruit

■ Apples
■ Oranges
■ Bananas
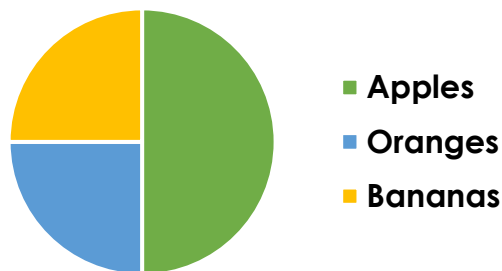
2a. The pie chart shows the votes of 36 people. Find the missing value.

Favourite School Subject

12

■ Maths
■ English
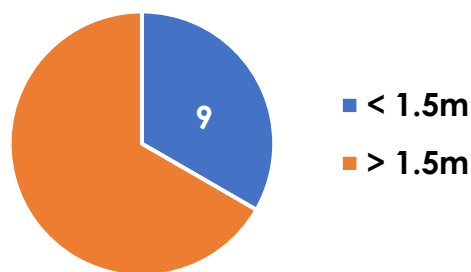
2b. The pie chart shows the results of 27 people. Find the missing value.

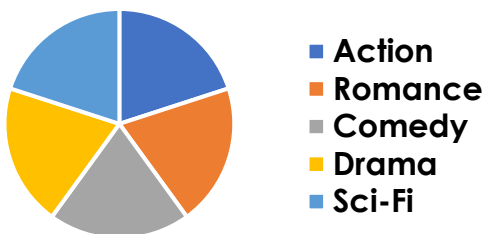### Height

9

■ < 1.5m
■ > 1.5m

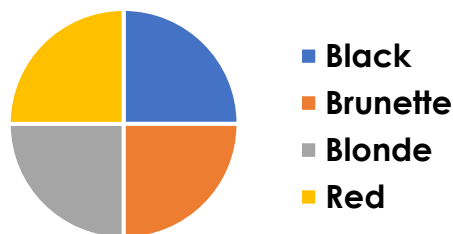3a. 100 people took part in a survey about films. How many people does each segment represent?

Favourite Film Type

■ Action
■ Romance
■ Comedy
■ Drama
■ Sci-Fi

3b. 80 people took part in a survey about their hair colour. How many people does each segment represent?

Hair Colour

■ Black
■ Brunette
■ Blonde
■ Red

4a. How many people from the 40 surveyed chose each pet type?

Favourite Pet

■ Cat
■ Dog
■ Rabbit
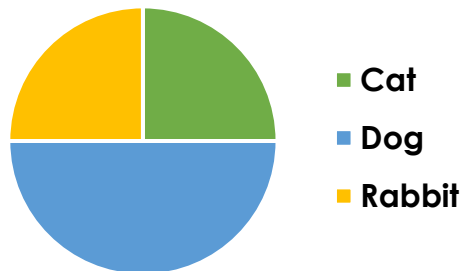
4b. How many people from the 50 surveyed chose each option?

Favourite Holiday

■ Adventure
■ Beach
■ Skiing
■ Cultural

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Varied Fluency – Read and Interpret Pie Charts – Year 6 Developing
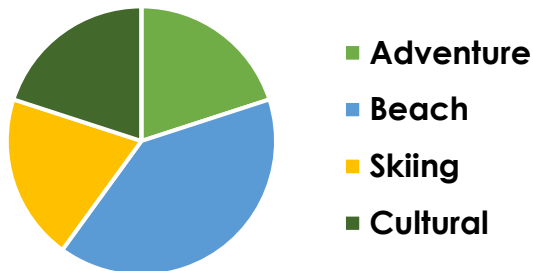
5a. What fraction of the pie chart represents people who threw <5m?

Throwing Distance

- <5m
- 5 - 10m
- >10m
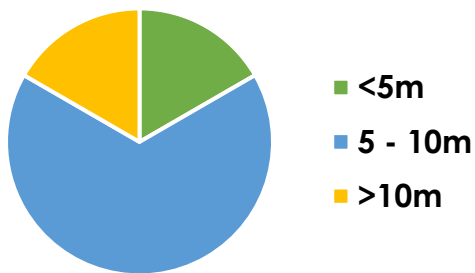
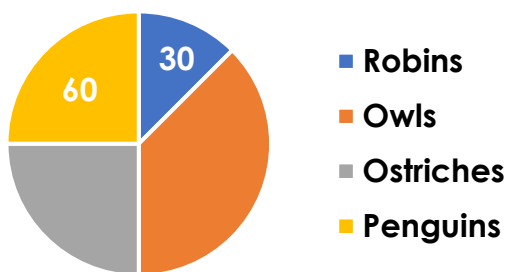**5b.** What fraction of the pie chart represents people who chose fantasy?

Favourite Type of Book

- Poetry
- Non-Fiction
- Sci-fi
- Fantasy
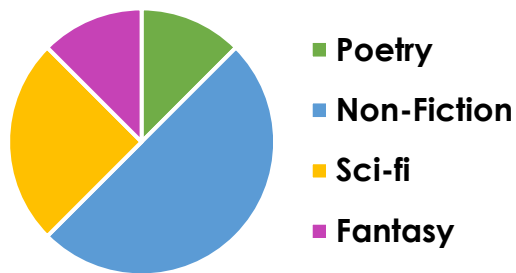
6a. The pie chart shows the votes of 240 people. Find the missing values.

Favourite Bird

30
60

- Robins
- Owls
- Ostriches
- Penguins

6b. The pie chart shows the results of 540 people. Find the missing values.

Favourite Music

90
180

- Hip hop
- Pop
- Rock
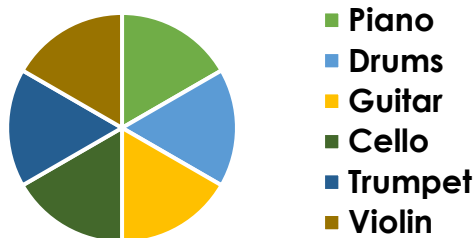- Classical
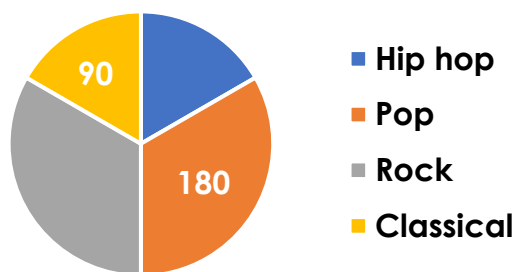
7a. 720 people took part in a survey about playing instruments. How many people does each segment represent?

Musical Instruments

- Piano
- Drums
- Guitar
- Cello
- Trumpet
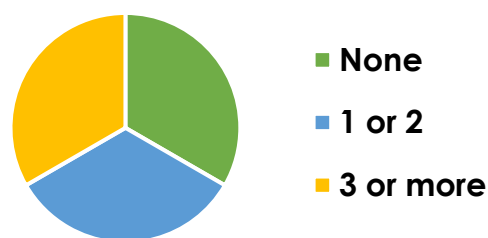- Violin

7b. 990 people took part in a survey about siblings. How many people does each segment represent?

Number of Siblings

- None
- 1 or 2
- 3 or more

8a. How many people from the 480 surveyed chose each option?

Holiday Destination

- UK
- Europe
- Rest of the world
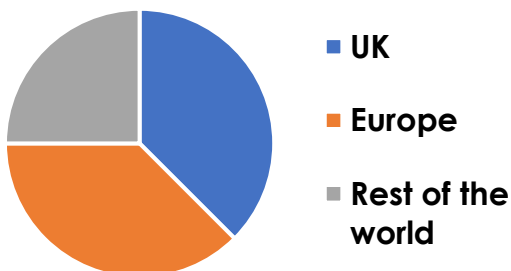
8b. How many people from the 320 surveyed chose each option?

Biggest Fear

- Spiders
- Heights
- Being on stage
- Flying
- Other
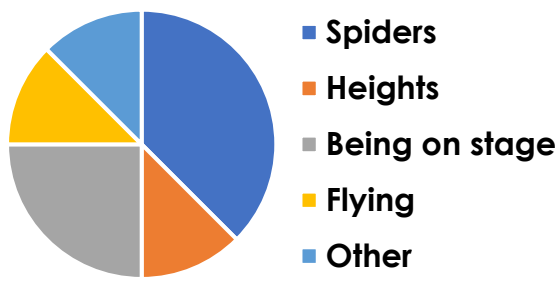
9a. What fraction of the pie chart represents people who live in Scotland?

Location of Home in UK

- England
- Scotland
- Wales
- Ireland

VF
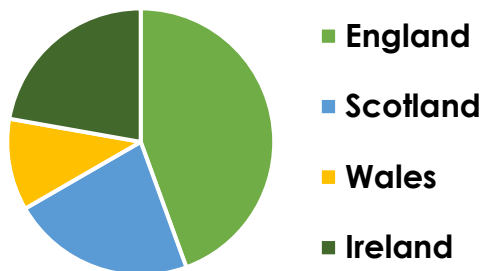
9b. What sized fraction of this pie chart represents people who chose fish?

Worst Type of Food

- Vegetables
- Spicy
- Sugary
- Meat
- Fish
- Other
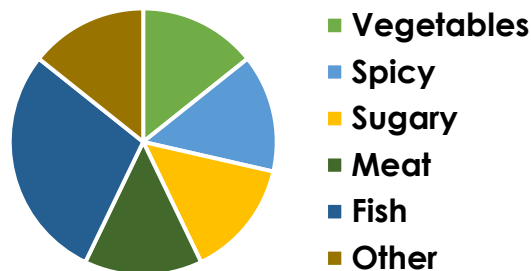
VF

10a. This pie chart shows the weight of 840 people. Find the missing values.

Weight

- Very underweight
- Underweight
- Healthy weight
- Overweight
- Very overweight

210

280
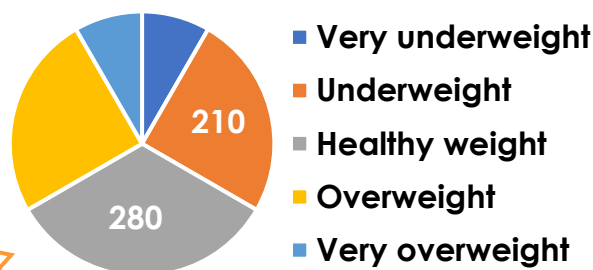
VF

10b. This pie chart shows the votes of 1,210 people. Find the missing values.

Favourite Day Out

- Walk
- Shops
- Beach
- Museum
- Aquapark
- Climbing

220

330
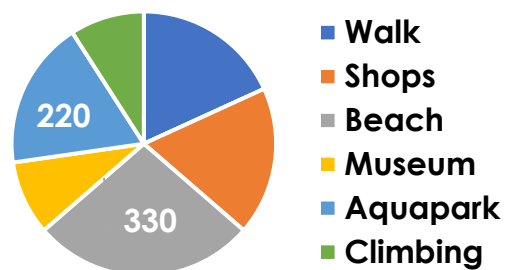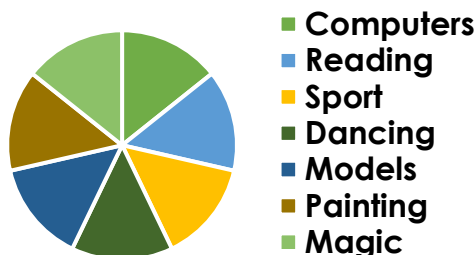
VF

11a. 630 people took part in a survey about their hobbies. How many people does each segment represent?

Favourite Hobby

- Computers
- Reading
- Sport
- Dancing
- Models
- Painting
- Magic

VF

11b. 720 people took part in a survey about toys. How many people does each segment represent?

Favourite Toy

- Dolls
- Action Figures
- Teddies
- Cars
- Trains
- Building blocks
- Yo-yos
- Puzzles
- Other
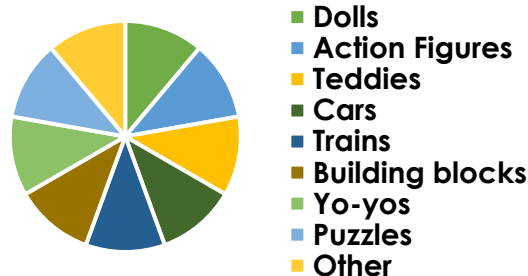
VF

12a. How many people from the 880 surveyed chose each option?

Favourite Pudding

- Cake
- Fruit
- Crumble
- Brownie
- Other
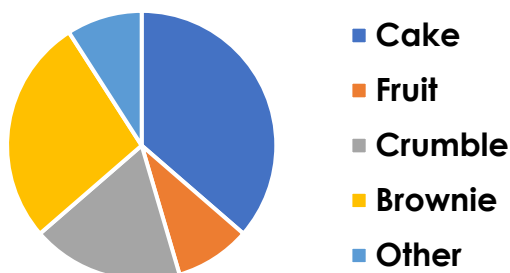
VF

12b. How many people from the 960 surveyed chose each option?

Best Superhero Power

- X-Ray Vision
- Bulletproof
- Invisibility
- Speed
- Flying
- Strength

VF
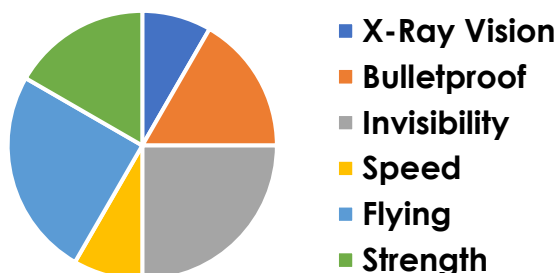
Developing

1a. $\frac{3}{4}$

2a. **24**

3a. **20**

4a. **Cat – 10, Dog – 20, Rabbit – 10**

Developing

1b. $\frac{1}{4}$

2b. **18**

3b. **20**

4b. **Adventure – 10, Beach – 20, Skiing – 10, Cultural – 10**

Expected

5a. $\frac{1}{6}$

6a. **Owls – 90, Ostriches – 60**

7a. **120**

8a. **UK – 180, Europe – 180, Rest of the world – 120**

Expected

5b. $\frac{1}{8}$

6b. **Hip Hop – 90, Rock – 180**

7b. **330**

8b. **Spiders – 120, Heights – 40, Being on stage – 80, Flying – 40, Other – 40**

Greater Depth

9a. $\frac{2}{9}$

10a. **Very underweight – 70, Overweight – 210, Very overweight – 70**

11a. **90**

12a. **Cake – 320, Fruit – 80, Crumble – 160, Brownie – 240, Other – 80**

Greater Depth

9b. $\frac{2}{7}$

10b. **Walk – 220, Shops – 220, Museum – 110, Climbing – 110**

11b. **80**

12b. **X-Ray Vision – 80, Bulletproof – 160, Invisibility – 240, Speed – 80, Flying – 240, Strength – 160**