

Strauss Preparatory School

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Subject: Math

Date: 1 June 2020

Class: Year 5

Learning objective: I can solve proportion problems using fractions to calculate missing values

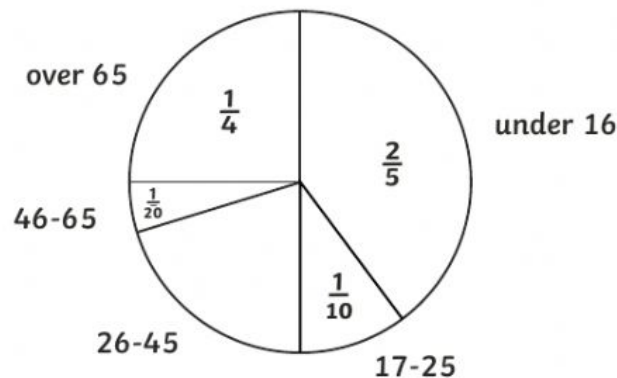
## Solving Proportion Problems

Solve these proportion problems. Show your working out.

1. At a fundraising event, £3600 was raised.  $\frac{1}{4}$  of the money raised was through food sales. £2000 was collected from raffle sales.  $\frac{1}{2}$  of the rest that was raised was through people playing games. How much was raised through games?

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2. This pie chart shows the age of visitors to a museum in the first half of a year:



There were 12 000 visitors in total. How many of the visitors were under 16? How many visitors were aged between 26 and 45?

**Under 16:**

**Between 26 and 45:**

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3. A cinema has three price bands of tickets:

- The best seats, with recliners, cost £15 per ticket.
- The standard seats cost £10.
- The cheapest seats cost £8.

On one day, there are sales in the following proportion – best seats are  $\frac{1}{4}$  of the total sales, the standard seats are  $\frac{3}{5}$  of the sales and the rest are the cheapest seats. If 100 tickets were sold in total, how much money was taken?

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4. A boat takes an hour journey. It travels at 30 kilometres an hour for the first 20 minutes, 40 kilometres an hour for the next 30 minutes and for the rest of the time at 24 kilometres an hour. How far does the boat travel?

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5. 500 people visit a zoo.  $\frac{2}{5}$  of the visitors are under 5 years of age. 50 visitors are children under 16 but are over 5 years old. Adults below 65 make up  $\frac{1}{4}$  of the visitors and the remaining visitors are over 65. How many of each age group are there?

a. Under 5

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b. Over 5 but under 16

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c. Adults below 65

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d. Adults over 65

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6. At a football match, there were 20 000 spectators. A quarter of the crowd were children who pay  $\frac{2}{3}$  of the full price ticket. A full price ticket costs £24. How much money was taken from child tickets?

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