**1** Brendon, Asha and Julie share some money in the ratios 3 : 2 : 6
The **total** amount of money that Asha and Julie receive is $36

Work out the amount of money that Brendon receives.

$......................................................

**(Total for Question 1 is 3 marks)**

**2**   Pieter owns a currency conversion shop.

Last Monday, Pieter changed a total of 20 160 rand into a number of different currencies.

He changed $\frac{3}{10}$ of the 20 160 rand into euros.

He changed the rest of the rands into dollars, rupees and francs in the ratios $9:5:2$

Pieter changed more rands into dollars than he changed into francs.

Work out how many more.

....................................................... rand

**(Total for Question 2 is 4 marks)**

**3**  There are 60 children in a club.

In the club, the ratio of the number of girls to the number of boys is $3:1$

$\dfrac{3}{5}$  of the girls play a musical instrument.

$\dfrac{4}{5}$  of the boys play a musical instrument.

What fraction of the 60 children play a musical instrument?

**(Total for Question 3 is 4 marks)**

**4** Work out the difference between the largest share and the smallest share when 3450 yen is divided in the ratios $2:6:7$

.................................................. yen

**(Total for Question 4 is 3 marks)**

**5** Danil, Gabriel and Hadley share some money in the ratios $3:5:9$
The difference between the amount of money that Gabriel receives and the amount of money that Hadley receives is 196 euros.

Work out the amount of money that Danil receives.

.................................................. euros

**(Total for Question 5 is 3 marks)**

**6** On a farm there are chickens, ducks and pigs.

The ratio of the number of chickens to the number of ducks is $7:2$
The ratio of the number of ducks to the number of pigs is $5:9$
There are 36 pigs on the farm.

Work out the number of chickens on the farm.

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**(Total for Question 6 is 3 marks)**

**7**  Andreas, Isla and Paulo share some money in the ratios 3 : 2 : 5

The **total** amount of money that Isla and Paulo receive is £76 more than the amount of money that Andreas receives.

Andreas buys a video game for £48.50 with some of his share of the money.

Work out how much money Andreas has left from his share of the money when he has bought the video game.

£.....................................................

**(Total for Question 7 is 4 marks)**

**8**  Anna and Lionel share $675 in the ratio 4 : 5

Lionel gives $\frac{3}{5}$ of his share of the money to his mother.

How much money does Lionel give to his mother?

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**(Total for Question 8 is 3 marks)**

**9**  120 children go on an activity holiday.
The ratio of the number of girls to the number of boys is $3:5$

On Sunday, all the children either go sailing or go climbing.

$\dfrac{16}{25}$ of the boys go climbing.

Twice as many girls go sailing as go climbing.

Work out how many children go sailing on Sunday.

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**(Total for Question 9 is 6 marks)**

**10** Behnaz makes 300 celebration cards so that

$$\frac{\text{number of}}{\text{birthday cards}} : \frac{\text{number of}}{\text{anniversary cards}} : \frac{\text{number of}}{\text{congratulations cards}} = 7:5:3$$

$\frac{2}{5}$ of the birthday cards have numbers on them.

36% of the anniversary cards have numbers on them.
None of the congratulations cards have numbers on them.

Work out what fraction of the 300 cards have numbers on them.
Give your answer in its simplest form.

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**(Total for Question 10 is 5 marks)**

**11** 3 years ago, the ratio of Tom's age to Clemmie's age was 2 : 7
Tom is now 15 years old and Clemmie is now *x* years old.

Find the value of *x*.

$x =$ ......................................................

**(Total for Question 11 is 3 marks)**

**12** The people working for a company work in Team A or in Team B.

number of people in Team A : number of people in Team B = 3 : 4

$\dfrac{4}{5}$ of Team A work full time.

24% of Team B work full time.

Work out what fraction of the people working for the company work full time.
Give your fraction in its simplest form.

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**13** The ratio $(y + x):(y - x)$ is equivalent to $k:1$

Show that $y = \dfrac{x(k + 1)}{k - 1}$

**14** White shapes and black shapes are used in a game.
Some of the shapes are circles.
All the other shapes are squares.

The ratio of the number of white shapes to the number of black shapes is $3:7$

The ratio of the number of white circles to the number of white squares is $4:5$

The ratio of the number of black circles to the number of black squares is $2:5$

Work out what fraction of all the shapes are circles.

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**(Total for Question 14 is 4 marks)**

**15** The ratio of Marta's hourly pay to Khalid's hourly pay is 6 : 5

Both Marta and Khalid get an increase of £1.50 in their hourly pay.
The ratio of Marta's hourly pay to Khalid's hourly pay after this increase is 13 : 11

Work out the hourly pay before the increase for Marta and for Khalid.

Marta £.....................................................

Khalid £.....................................................

**(Total for Question 15 is 4 marks)**

**16** *p* and *q* are two numbers such that $p > q$

When you subtract 5 from *p* and subtract 5 from *q* the answers are in the ratio $5:1$
When you add 20 to *p* and add 20 to *q* the answers are in the ratio $5:2$

Find the ratio $p:q$
Give your answer in its simplest form.

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**(Total for Question 16 is 5 marks)**

**17** $5c + d = c + 4d$

(a) Find the ratio $c : d$

.................................................

(2)

$6x^2 = 7xy + 20y^2$ where $x > 0$ and $y > 0$

(b) Find the ratio $x : y$

.................................................

(3)

**(Total for Question 17 is 5 marks)**