1. [2 marks]

In a school, there is a total of 640 children.
The ratio of the number of girls to the number of boys is 7 : 9

How many boys are there in this school?

....

2. [2 marks]

In the 2012 Paralympic Games, the total number of gold and silver medals won by Brazil was 35
The ratio of the number of gold medals that Brazil won to the number of silver medals that Brazil won was 3 : 2

How many silver medals were won by Brazil?

....

3. [2 marks]

Rajesh and Gudi share some money in the ratio 2:5
Rajesh receives £240

Work out the amount of money that Gudi receives.

£ ....

4.

Rafael and Roger played tennis against each other 30 times.
Each of the times they played, either Rafael won or Roger won.
The ratio of the number of times Rafael won to the number of times Roger won is $7:3$

(a) Work out the number of times Rafael won.

....

(2)

In a school, there are 75 girls in the tennis squad.
The ratio of the number of boys in the tennis squad to the number of girls in the tennis squad is $4:3$

(b) Work out the number of boys in the tennis squad.

....

(2)

5.

There are 20 students in a class.
12 of the students are girls.

Find the ratio of the number of girls to the number of boys.
Give your ratio in the form $n : 1$

.... : 1

6.   **[2 marks]**

Green paint can be made by mixing yellow paint and blue paint in the ratio 2 : 3
Wendy makes 15 litres of green paint.

Work out how many litres of blue paint Wendy uses.

.... litres

7.   **[6 marks]**

A school has 840 pupils and 40 teachers.

(a) Find the ratio of the number of pupils to the number of teachers.
    Give your ratio in the form n : 1

.... : 1
(2)

In Year 11 at the school, the ratio of the number of pupils who study Chemistry to the
number of pupils who study Physics is 3 : 2

(b) 105 pupils in Year 11 study Chemistry.
    Work out the number of pupils in Year 11 who study Physics.

....
(2)

For the 105 pupils who study Chemistry, the ratio of the number of boys to the number of
girls is 4 : 3

(c) Work out the number of girls in Year 11 who study Chemistry.

....
(2)

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8. **[3 marks]**

The perimeter of a triangle is 90 cm.
The lengths of the sides of the triangle are in the ratios 3 : 5 : 7

Work out the length of the longest side of the triangle.

.... cm

9. **[3 marks]**

Carlos mixes cement, lime and sand in the ratios 1 : 2 : 9 by weight.

Work out the weight of cement, the weight of lime and the weight of sand in 60 kg of the mixture.

cement .... kg

lime .... kg

sand .... kg

10. **[2 marks]**

Bronze is made from copper and tin.
The ratio of the weight of copper to the weight of tin is 3 : 1

Work out the weight of copper in 280 grams of bronze.

.... grams

Pritam, Sarah and Emily share some money in the ratios 3 : 6 : 4
Sarah gets $15 more than Emily.

Work out the amount of money that Pritam gets.

$ ....

(a) Philip and Nikos share some money in the ratio 3:4
     Nikos receives £24
     Work out how much Philip receives.

£ ....
(2)

(b) James and Suki share £40 in the ratio 3:5
     Work out how much Suki receives.

£ ....
(2)

13. [4 marks]

The ratio of Mark's age to Reeta's age is 3 : 5
Mark's age is 24 years.

(a) Work out Reeta's age.

.... years

(2)

The ratio of John's age to Zahra's age is 1 : 4
The sum of their ages is 45 years.

(b) Work out Zahra's age.

.... years

(2)

14. [6 marks]

Two fruit drinks, *Fruto* and *Tropico*, are sold in cartons.

(a) *Fruto* contains only orange and mango.
The ratio of orange to mango is $3 : 2$
A carton of *Fruto* contains a total volume of $250\,cm^3$.

Find the volume of orange in a carton of *Fruto*.

.... cm^3

(3)

(b) *Tropico* contains only lemon, lime and grapefruit.
The ratios of lemon to lime to grapefruit are $1 : 2 : 5$
The volume of grapefruit in a carton of *Tropico* is $200\,cm^3$.

Find the total volume of *Tropico* in a carton.

.... cm^3

(3)

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15. [2 marks]

On Trisha's bookshelf, the ratio of paperback books to hardback books is 5 : 3
The number of paperback books that Trisha has is 130.

(a)   Work out the number of hardback books that Trisha has.

....
(1)

The 130 paperback books are split between fiction and non-fiction in the ratio 2 : 3

(b)   Work out the number of non-fiction books.

....
(1)

---

16. [4 marks]

Last year in Mathstown High School, the ratio of the number of candidates for
IGCSE mathematics to the number of candidates for IGCSE biology was 5 : 2
The number of candidates for IGCSE mathematics was 80

(a) Work out the number of candidates for IGCSE biology.

....
(2)

The 80 mathematics candidates were divided between Foundation and Higher in the
ratio 1 : 3

(b) Work out the number of Foundation candidates.

....
(2)

17. **[2 marks]**

In 2004, the ratio of the number of planes in Air China's fleet to the number of planes in Malaysian Airlines' fleet was 6 : 7
There were 72 planes in Air China's fleet.

Work out the number of planes in Malaysian Airlines' fleet.

....

18. **[3 marks]**

Lisa, Max and Punita share £240 in the ratio 3 : 4 : 8

How much more money than Lisa does Punita get?

£.........................
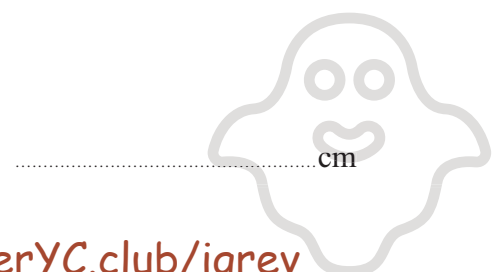
19. **[3 marks]**

The lengths of the sides of a triangle are in the ratios 2 : 6 : 7
The length of the longest side of the triangle is 24.5 cm.

Work out the perimeter of the triangle.

....cm

20. **[3 marks]**

Plumbers' solder is made from tin and lead.
The ratio of the weight of tin to the weight of lead is $1 : 2$

(a) Work out the weight of tin and the weight of lead in 120 grams of plumbers' solder.

tin .... g

lead .... g

(2)

(b) What weight of plumbers' solder contains 25 grams of tin?

.... g

(1)

21. **[3 marks]**

Anji mixes sand and cement in the ratio $7 : 2$ by weight.
The total weight of the mixture is 27 kg.

Calculate the weight of sand in the mixture.

.... kg

22. **[3 marks]**

Jack, Kate and Lila share some money in the ratios 5 : 9 : 6
In total, Jack and Kate receive £56

Work out the amount of money Lila receives.

£ ....

23. **[6 marks]**

Flaky pastry is made using flour and fat in the ratio $9:7$ by weight.
Cassie makes some flaky pastry.
She uses 175 grams of fat.

(a) Work out the weight of flour Cassie uses.

.... grams

(2)

Sweet pastry is made using flour, fat and sugar in the ratio $27:14:9$ by weight.
Luke makes some sweet pastry.
The total weight of flour, fat and sugar he uses is 400 grams.

(b) Work out the weight of flour Luke uses.

.... grams

(2)

Elisha makes some flaky pastry and some sweet pastry.
She uses the same weight of flour for the flaky pastry as she does for the sweet pastry.

(c) Work out the ratio of the weight of fat she uses in the flaky pastry to the weight of fat she uses in the sweet pastry.

....

(2)

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24. **[4 marks]**

Mortar mix is made by mixing cement, sand and quicklime in the ratio 1 : 2 : 3

(a) Work out the volume of sand needed to make 2.1 m³ of mortar mix.

.... m³

(2)

Julie has 0.75 m³ of quicklime.

She has plenty of sand and cement.

(b) Work out the greatest volume of mortar mix she could make.

.... m³

(2)

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