

Name: _____

Exam Style Questions

Ratio



Corbettmaths

Ensure you have: Pencil, pen, ruler, protractor, pair of compasses and eraser

You may use tracing paper if needed

Guidance

1. Read each question carefully before you begin answering it.
2. Don't spend too long on one question.
3. Attempt every question.
4. Check your answers seem right.
5. Always show your workings

Revision for this topic

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[Video 269](#)

[Video 270](#)

[Video 271](#)



1. (a) Simplify the ratio 25 : 35

$$\frac{5:7}{(1)}$$

(b) Simplify the ratio 18 : 45

$$\frac{2:5}{(1)}$$

(c) Simplify the ratio 300 : 25

$$\frac{12:1}{(1)}$$

2. Divide £700 in the ratio 5 : 3 : 2

$$5+3+2 = 10$$

$$£700 \div 10 = £70$$

$$£70 \times 5 = £350$$

$$£70 \times 3 = £210$$

$$£70 \times 2 = £140$$

$$\frac{£ 350 \quad £ 210 \quad £ 140}{(3)}$$

3. Alex and Thomas share 30 sweets.
They divide them in the ratio 3:2.

How many sweets does Thomas have?

$$3 + 2 = 5$$

$$30 \div 5 = 6$$

$$6 \times 3 = 18$$

$$6 \times 2 = 12$$

12

.....
(2)

4. Sophie has 60 pencils.
The ratio of sharpened pencils to blunt pencils is 4:1

How many sharpened pencils does Sophie have?

$$4 + 1 = 5$$

$$60 \div 5 = 12$$

$$12 \times 4 = 48$$

48

.....
(2)

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5. The number of people who voted for the Green Party in an election was 1500.
The number of people who voted for the Blue Party was 9000.

Write the ratio of Green Party voters to Blue Party voters in its simplest form.

$$\begin{aligned}1500 &: 9000 \\15 &: 90 \\1 &: 6\end{aligned}$$

$$\frac{1:6}{(2)}$$

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6. A piece of carpet is 240cm long.
Mr Jones cuts it into three pieces in the ratio $1 : 2 : 5$

Work out the length of the longest piece of carpet.

$$\begin{aligned}1 + 2 + 5 &= 8 \\240 \div 8 &= 30 \\30 \times 5 &= 150\end{aligned}$$

$$\frac{150 \text{ cm}}{(3)}$$

7. Sarah has some chocolates.

24 are white chocolate.

16 are milk chocolate.

8 are dark chocolate.

(a) Write down the ratio of white chocolate to milk chocolate to dark chocolate.
Give your ratio in its simplest form.

$$24:16:8$$

$$\begin{array}{ccc} 3 & 2 & 1 \\ \hline \end{array} : \begin{array}{ccc} 2 & 1 & 1 \\ \hline \end{array} : \begin{array}{ccc} 1 & 1 & 1 \\ \hline \end{array}$$

(2)

Rachel has some apples and bananas.

The ratio of apples to bananas is 2 : 3

She has 14 apples.

(b) Work out how many bananas Rachel has.

$$14 \div 2 = 7$$

$$7 \times 3 = 21$$

$$\begin{array}{c} 21 \\ \hline \end{array}$$

(2)

8. Chris and Molly win money in a competition.
They share the money in the ratio 2 : 3
Molly receives £240.

(a) How much money does Chris receive?

$$240 \div 3 = 80$$

$$80 \times 2$$

$$\text{£ } 160 \dots\dots\dots$$

(2)

(b) How much money did they win in the competition?

$$\begin{array}{r} 240 \\ + 160 \\ \hline 400 \end{array}$$

$$\text{£ } 400 \dots\dots\dots$$

(1)

9. Divide £945 in the ratio 2 : 5

$$2 + 5 = 7$$

$$7 \overline{) 945}$$

$$135 \times 2 = 270$$

$$135 \times 5 = 675$$

$$\begin{array}{r} 135 \\ \times 25 \\ \hline 675 \end{array}$$

$$\text{£ } 270 \dots\dots\dots \quad \text{£ } 675 \dots\dots\dots$$

(2)

10. At a rugby match, the ratio of children to adults is 2 : 3
There are 80 children in the crowd.
Each adult ticket costs £8
Each child ticket costs a quarter of the adult ticket. £2

Work out the total money made from ticket sales.

$$80 \div 2 = 40$$
$$40 \times 3 = 120 \text{ adults}$$

$$£8 \times 120 = £960$$

$$£2 \times 80 = £160$$
$$\begin{array}{r} \underline{160} \\ 1120 \end{array}$$

£1120
(4)

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11. Charlene and Danielle share some money in ratio 2 : 3
Danielle gets £25 more than Charlie.

How much does each girl receive?

$$3 - 2 = 1 \text{ part}$$

$$1 \text{ part} = 25$$

$$2 \times 25 = 50$$

$$3 \times 25 = 75$$

Charlene £50

Danielle £75

(3)

12. The ratio of boys to girls in a school is 4 : 5
There are 220 boys in the school.

How many students attend the school?

$$220 \div 4 = 55$$

$$55 \times 5 = 275$$

$$220 + 275 = 495$$

$$\frac{495}{(3)}$$

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13. The ratio of girls to boys in a class is 2 : 3

What fraction of the class are girls?

$$2 + 3 = 5$$

$$\frac{2}{5}$$

(1)

What percentage of the class are boys?

$$\frac{3}{5} = 60\%$$

$$60\%$$

(1)

14. The angles in a triangle are in the ratio 1 : 2 : 9

What is the size of the largest angle?

$$1+2+9 = 12$$

$$180 \div 12 = 15$$

$$15 \times 9 = 135$$

$$135^\circ$$

.....
(2)

15. Three angles are in the ratio 2 : 3 : 5
The smallest angle is 50°

Work out the sizes of the other two angles

$$50 \div 2 = 25$$

$$25 \times 3 = 75^\circ$$

$$25 \times 5 = 125^\circ$$

$$75^\circ \text{ and } 125^\circ$$

..... and
(2)

16. 4 schools sent students to a languages course.

One of the schools sent both French and German students.
The ratio of French to German students it sent was 1 : 3
The school sent 21 German students.

The other 3 schools sent the same number of students.

Work out the total number of students sent to the languages course.

$$21 \div 3 = 7$$

$$7 + 21 = 28$$

$$\begin{array}{r} 28 \\ \times 4 \\ \hline 112 \end{array}$$

112

(4)