

N.2 (b) Ratio and Proportion

JCHL 2017 – Question 4 (b)

Fruitex and *Juicy* are each made from mixing fruit juice and water.

In *Fruitex*, the ratio of fruit juice to water is 3: 7.

(i) Find how many litres of fruit juice are in 20 litres of *Fruitex*.

20 litres of *Fruitex* is mixed with 40 litres of *Juicy*.

In this 60-litre mixture, the ratio of fruit juice to water is 7: 8.

(ii) Find the ratio of fruit juice to water in *Juicy*. Give your answer in its simplest form.

JCHL 2015 Supplementary – Question 9 (a)

A rectangular television screen has a diagonal of length 42 inches. The sides of the television screen are in the ratio 16:9.

Find the area of the television screen, correct to the nearest whole number.

JCHL 2012 – Question 4 (a)

A soccer team has three strikers John, Paul and Michael. The number of minutes each had played by the end of a particular season is shown on the table. The team divided a bonus of €150 000 between its strikers in proportion to the time each had played.

Name	Minutes Played
John	2250
Paul	2600
Michael	150

Calculate the amount each player received.

LCOL 2015 – Question 2 (a)

John, Mary and Eileen bought a ticket in a draw. The ticket cost €50. John paid €25, Mary paid €15 and Eileen paid €10. The ticket won a prize of €20 000. The prize is divided in proportion to how much each paid. How much prize money does each person receive?

JCHL Old Course Examples

JCHL 2013– Question 2 (a)

The lengths of two pieces of timber are in a ratio of 5 : 2.

The larger piece measures 250 mm.

Find the length of the shorter piece.

JCHL 2012 – Question 2 (a)

Fuel consumption in a car is measured in litres per 100 km.

Alan’s car travels 1250 km on a tank of 68 litres.

Calculate his car’s fuel consumption in litres per 100 km.

JCHL 2011 – Question 1 (a)

Peter and Anne share a lotto prize in the ratio $3\frac{1}{2}$ to $2\frac{1}{2}$.

Peter’s share is €35 000.

What is the total prize fund.

JCHL 2009 – Question 3 (a)

Eight workers can build a cabin in 60 hours.

How many workers are needed if the cabin is to be built in 32 hours?

JCHL 2008 – Question 2 (b)

Two brands of blackcurrant squash drinks contain concentrated juice and sugar.

In brand A, the ratio of concentrated juice to sugar is 19:1.

In brand B, the ratio of concentrated juice to sugar is 9:1.

- (i) What is the volume of concentrated juice in 500 ml of brand A?
- (ii) What is the volume of sugar in 300 ml of brand B?
- (iii) 500 ml of brand A is mixed with 300 ml of brand B.

What is the ratio of the concentrated juice to the sugar in the mixture?

JCHL 2004 – Question 1 (a)

The area of a house covers 205 m^2 .

The area of the site for the house covers 1025 m^2 .

What is the of the area of the house to the area of the site?

Give your answer in the form $1:n$, where $n \in \mathbf{N}$.

LCOL Old Course Examples

LCOL 2012 – Question 1 (a)

When Katie had travelled 140 km, she had completed $\frac{4}{9}$ of her journey.

Find the length of her journey.

LCOL 2011 – Question 1 (a)

Aoife and Brian share a prize fund in the ratio 4 : 3. Aoife gets €56.

- (i) Find the total prize fund.
- (ii) How much does Brian get?

LCOL 2009 – Question 1 (a)

Conor and Alice share 50 apples in the ratio 3 : 7.

- (i) How many apples does Conor get?
- (ii) How many apples does Alice get?

LCOL 2007 – Question 1 (a)

Convert 164 miles to kilometres, taking 5 miles to be equal to 8 kilometres.

LCOL 2006 – Question 2 (a)

€320 is $\frac{4}{9}$ of a prize fund. Find the total prize fund.

LCOL 2006 – Question 2 (a)

Express 35 cm as a fraction of 1 m. Give your answer in its simplest form.

LCOL 2005 – Question 1 (a)

Express 35 cm as a fraction of 1 m. Give your answer in its simplest form.

LCOL 2005 – Question 1 (b) (ii)

Express the ratio $\frac{1}{2} : \frac{1}{3} : \frac{1}{4}$ as a ratio of natural numbers.

Divide 325 in the ratio $\frac{1}{2} : \frac{1}{3} : \frac{1}{4}$.

LCOL 2002 – Question 1 (a)

Copper and zinc are mixed in the ratio 19 : 6.

The amount of copper used is 133 kg.

How many kilogrammes of zinc are used?

LCOL 2001 – Question 1 (a)

A cookery book gives the instruction for calculating the amount of time for which a turkey should be cooked:

“Allow 15 minutes per 450 grammes plus an extra 15 minutes.”

For how many hours and minutes should a turkey weighing 9 kilogrammes be cooked?

LCOL 2000 – Question 1 (a)

Express 400 grammes as a fraction of 1 kilogramme. Give your answer in its simplest form.

LCOL 1999 – Question 1 (a)

€40 is divided between 2 pupils in the ratio 7:3. How much does each pupil get?