1. At a festival, 380 people out of 500 people questioned say that they are camping.
   There are 55300 people at the festival.
   Calculate an estimate of the total number of people camping at the festival. [2]
   0580/42/M/J/22 Q6(a)

2. A factory produces bird food made with sunflower seed, millet and maize.
   (a) The amounts of sunflower seed, millet and maize are in the ratio
   sunflower seed : millet :maize = 5 : 3 : 1 .
   (i) How much millet is there in 15 kg of bird food? [2]
   (ii) In a small bag of bird food there is 60 g of sunflower seed.
   What is the mass of bird food in a small bag? [2]
   0580/42/O/N/12 Q1(a)

3. One day, the newspaper had 60 pages of news and advertisements.
   The ratio of number of pages of news : number of pages of advertisements = 5 : 7.
   (i) Calculate the number of pages of advertisements. [2]
   (ii) Write the number of pages of advertisements as a percentage of the number of pages of news. [1]
   0580/42/M/J/19 Q1(b)

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4. The Smith family paid $5635 for a holiday in India.
The total cost was divided in the ratio
travel : accommodation : entertainment =
10 : 17 : 8.
(a) Calculate the percentage of the total cost spent on entertainment. [2]
(b) Show that the amount spent on accommodation was $2737. [2]
0580/42/F/M/17 Q1)(a)

5. There are three types of tickets, economy, business and first class.
The price of these tickets is in the ratio
economy : business : first class = 2 : 5 : 9.
(i) The price of a business ticket is $2350.
Calculate the price of a first class ticket. [2]
(ii) Work out the price of an economy ticket as a percentage of the price of a first class ticket. [1]
0580/42/M/J/16 Q1(b)

6. A football club sells tickets at different prices dependent on age group.
(i) At one game, the club sold tickets in the ratio
under 18 : 18 to 60 : over 60 = 2 : 7 : 3.
There were 6100 tickets sold for people aged under 18.
Calculate the total number of tickets sold for the game. [3]
(ii) Calculate the percentage of tickets sold for people aged under 18. [1]
0580/43/M/J/16 Q1(a)

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7. The visitors to the campsite today are in the ratio
men : women = 5 : 4 and
women : children = 3 : 7.
(i) Calculate the ratio men : women : children in its simplest form. [2]
(ii) Today there are 224 children at the campsite.
Calculate the total number of men and women. [3]
0580/43/M/J/20 Q1(c)

8. Carl, Dina and Eva share 100 oranges.
The ratio Carl's oranges : Dina's oranges $= 3:5$.
The ratio Carl's oranges : Eva's oranges $= 2:3$.
Find the number of oranges Carl receives. [2]
0580/42/F/M/23 Q1(b)

9. A company makes compost by mixing loam, sand and coir in the following ratio.
Loam : sand : coir = 7 : 2 : 3
(i) How much loam is there in a 72 litre bag of the compost? [2]
(ii) In a small bag of the compost there are 13.5 litres of coir.
How much compost is in a small bag? [2]
0580/41/O/N/14 Q1)(a)

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10. The people who work for the company are in the following age groups.

Group A	Group B	Group C
Under 30 years	30 to 50 years	Over 50 years

The ratio of the number in group A to the number in group B is 7 : 10.
The ratio of the number in group B to the number in group C is 4 : 3.
(i) Find the ratio of the number in group A to the number in group C.
Give your answer in its simplest form. [3]
(ii) There are 45 people in group C.
Find the total number of people who work for the company. [3]
0580/42/M/J/18 Q1)(d)

11. Arjun and Gretal each pay rent.
In 2018, the ratio of the amount each paid in rent was Arjun : Gretal = 5 : 7.
In 2019, the ratio of the amount each paid in rent was Arjun : Gretal = 9 : 13.
Arjun paid the same amount of rent in both 2018 and 2019.
Gretal paid $290 more rent in 2019 than she did in 2018.
Work out the amount Arjun paid in rent in 2019.
0580/41/M/J/20 Q1 (e)

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12. The fares for the train journey are shown in the table below

From London to Marseille	Standard fare	Premier fare
Adult	$84	$140
Child	$60	$96

(i) For the standard fare, write the ratio adult fare : child fare in its simplest form. [1]

(ii) For an adult, find the percentage increase in the cost of the standard fare to the premier fare. [3]

(iii) For one journey from London to Marseille, the ratio number of adults : number of children = 11 : 2. There were 220 adults in total on this journey. All of the children and 70% of the adults paid the standard fare. The remaining adults paid the premier fare. Calculate the total of the fares paid by the adults and the children. [5]

0580/43/M/J/19 Q1)(b)

13. (a) The angles of a triangle are in the ratio 2 : 3 : 5.

(i) Show that the triangle is right-angled. [1]

(ii) The length of the hypotenuse of the triangle is 12cm. Use trigonometry to calculate the length of the shortest side of this triangle. [3]

(b) The sides of a different right-angled triangle are in the ratio 3 : 4 : 5.

(i) The length of the shortest side is 7.8cm. Calculate the length of the longest side. [2]

(ii) Calculate the smallest angle in this triangle. [3]

0580/43/O/N/17 Q1)(a)

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14. The download times for the music, films and books are in the ratio
music :films : books = 2 : 9 : 1.
The total download time is 3 hours and 33 minutes.
Calculate the download time for the films.
Give your answer in hours, minutes and seconds. [3]
0580/42/O/N/14 Q1(b)

15. Noma flies from Johannesburg to Hong Kong.
Her plane leaves Johannesburg at 1845 and arrives in Hong Kong 13 hours and 25 minutes later.
The local time in Hong Kong is 6 hours ahead of the time in Johannesburg.
(a) At what time does Noma arrive in Hong Kong? [2]
(b) Noma sleeps for part of the journey. The time that she spends sleeping is given by the ratio
Sleeping : awake = 3:4 . Calculate how long Noma sleeps during the journey.
Give your answer in hours and minutes. [2]
0580/42/O/N/13 Q7)

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16. Here are the ingredients needed to make a pasta bake to

250 g butter
600 g pasta
460 g mushrooms
280 g cheese
800 ml milk

serve 12 people.

(i) Find the mass of the cheese as a percentage of the mass of the mushrooms. [1]

(ii) Find the mass of butter needed to make a pasta bake to serve 18 people. [2]

(iii) Monica has 2.2 litres of milk and 1.5kg of each other ingredient.

Calculate the greatest number of people she can serve with pasta bake. [3]

0580/43/O/N/22 Q1)(a)

Answers

Q1) 42028	Q2(i)5 (ii)108	Q3)(i)35 (ii)140
Q4) (a) 22.9	Q5) (i) 4230 (ii)22.2	Q6) (i) 36 600 (ii) 16.7
Q7) (i) 15 : 12 : 28 (ii) 216	Q8) 24	Q9)(a)(i)42 (ii) 54
Q10) (d)(i) 14:15 (ii) 147	Q11) 6525	Q12)(i) 7:5(ii)66.7(iii) 24 576
Q13)(a)(ii) 7.05(b)(i)13(ii) 36.9	Q14) (b) 2h 39mins 45 secs	Q15) (a) 14 10 or 2 10 pm (b) 5 hours 45 minutes
Q16) (a)(i)60.9 (ii)375 (iii) 30		

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