

- 1** There are 30 children in a nursery school.
At least 1 adult is needed for every 8 children in the nursery.
- (a) Work out the least number of adults needed in the nursery.

.....
(2)

2 more children join the nursery.

- (b) Does this mean that more adults are needed in the nursery?
You must give a reason for your answer.

.....
(1)

(Total for Question 1 is 3 marks)

2 The table shows the lengths of five rivers.

River	Length (km)
Trent	297
Don	112
Severn	354
Thames	346
Mersey	113

(a) Write down the rivers in order of length.

Start with the shortest river.

.....
.....
(1)

Ami says,

“The River Thames is more than three times as long as the River Don.”

(b) Show that Ami is correct.

.....
.....
(1)

(Total for Question 2 is 2 marks)

3 Sue has 2 cats.

Each cat eats $\frac{1}{4}$ of a tin of cat food each day.

Sue buys 8 tins of cat food.

Has Sue bought enough cat food to feed her 2 cats for 14 days?

You must show how you get your answer.

(Total for Question 3 is 3 marks)

- 4 Adrian is going to make concrete.
He is going to use

180 kg of cement
375 kg of sand
1080 kg of stone

Cement, sand and stone are sold in bags.

1 bag cement	1 bag sand	1 bag stone
25 kg	22.5 kg	50 kg

Adrian already has

10 bags of cement
20 bags of sand
20 bags of stone

Work out what bags he needs to buy to make the concrete.

(Total for Question 4 is 3 marks)

5 A piece of wire is 240 cm long.

Peter cuts two 45 cm lengths off the wire.

He then cuts the rest of the wire into as many 40 cm lengths as possible.

Work out how many 40 cm lengths of wire Peter cuts.

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

6 David has twice as many cousins as Becky.
Becky has twice as many cousins as Nishat.

Nishat has 6 cousins.

How many cousins does David have?

.....
(Total for Question 6 is 2 marks)

7 Here is the charge at a car park in Spain.

<p style="text-align: center;">Car park 0.024 euros per minute</p>

Jon parked his car in this car park.

Jon drove into the car park at 1045

When he drove out of the car park he had to pay 8.40 euros.

At what time did Jon drive out of the car park?

.....
(Total for Question 7 is 3 marks)

8 Cornflakes are sold in two sizes of box.

Size of box	Weight of cornflakes
small	450 g
large	750 g

Rae buys 3 small boxes of cornflakes and some large boxes of cornflakes.
In total she buys 5850 g of cornflakes.

Work out the number of large boxes of cornflakes Rae buys.

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

9 There are four types of counter in a bag.

The table shows the number of each type of counter in the bag.

Type of counter	red circle	green circle	red square	green square
Number of counters	16	26	11	7

There are more green counters than red counters.
How many more?

.....
(Total for Question 9 is 2 marks)

Summer 2020 Paper 1 Q10

10 Jenny has 12 marbles.

$\frac{1}{4}$ of these 12 marbles are large.

The rest of these 12 marbles are small.

Each large marble has a weight of 70 grams.

Each small marble has a weight of 50 grams.

Work out the total weight of the 12 marbles.

..... grams

(Total for Question 10 is 4 marks)

11 A machine fills bags with sweets.

There are 4275 sweets.

There are 28 sweets in each full bag.

The machine fills as many bags as possible.

How many sweets are left?

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

Autumn 2021 Paper 1 Q7

12 £42 is shared equally between 3 friends.

How much does each friend get?

£.....

(Total for Question 12 is 2 marks)

13 Rachel records the temperature in her garden at noon each day.

On Monday, the temperature was 5°C .

On Tuesday, the temperature was 10° less than the temperature on Monday.

On Wednesday, the temperature was 3° greater than the temperature on Tuesday.

Find the difference between the temperature on Monday and the temperature on Wednesday.

You must show all your working.

..... $^{\circ}\text{C}$

(Total for Question 13 is 2 marks)

14 A baker has three bags of flour, **A**, **B** and **C**.

Bag **A** and bag **B** contain the same amount of flour.
Bag **C** contains 940 g of flour.

In the three bags, there is a total of 2500 g of flour.

Work out the amount of flour in bag **A**.

..... g

(Total for Question 14 is 3 marks)

- 15 The table shows the total number of apples sold and the total number of oranges sold in a shop in each of three weeks.

	Week 1	Week 2	Week 3
Number of apples	86	75	92
Number of oranges	68	80	76

In total for the three weeks, more apples than oranges were sold.
How many more?

.....
(Total for Question 15 is 3 marks)

- 16** Sinita wants to make 35 picture frames.
She needs 4 nails for each frame.

Sinita has 3 boxes of nails.
There are 48 nails in each box.

Has Sinita got enough nails to make all 35 frames?
Show how you get your answer.

(Total for Question 16 is 3 marks)

17 Ken buys some fruit.

He buys apples, bananas, peaches and oranges.

Ken buys

4 apples	weighing 125 g each
2 bananas	weighing 170 g each
3 peaches	weighing 135 g each

Each orange has a weight of 90 g.

The fruit has a total weight of 1.785 kg.

(a) Work out how many oranges Ken buys.

.....
(3)

Jane wants to buy 15 tomatoes.

She asks for 1 kg of tomatoes at a shop.

Jane assumes that each tomato has a weight of 75 g.

(b) (i) If Jane's assumption is correct, will she get 15 tomatoes?

You must show how you get your answer.

(2)

(ii) If Jane's assumption is **not** correct, could she get 15 tomatoes?

Justify your answer.

.....
.....
(1)

(Total for Question 17 is 6 marks)

18 On Saturday, some adults and some children were in a theatre.
The ratio of the number of adults to the number of children was 5 : 2

Each person had a seat in the Circle or had a seat in the Stalls.

$\frac{3}{4}$ of the children had seats in the Stalls.

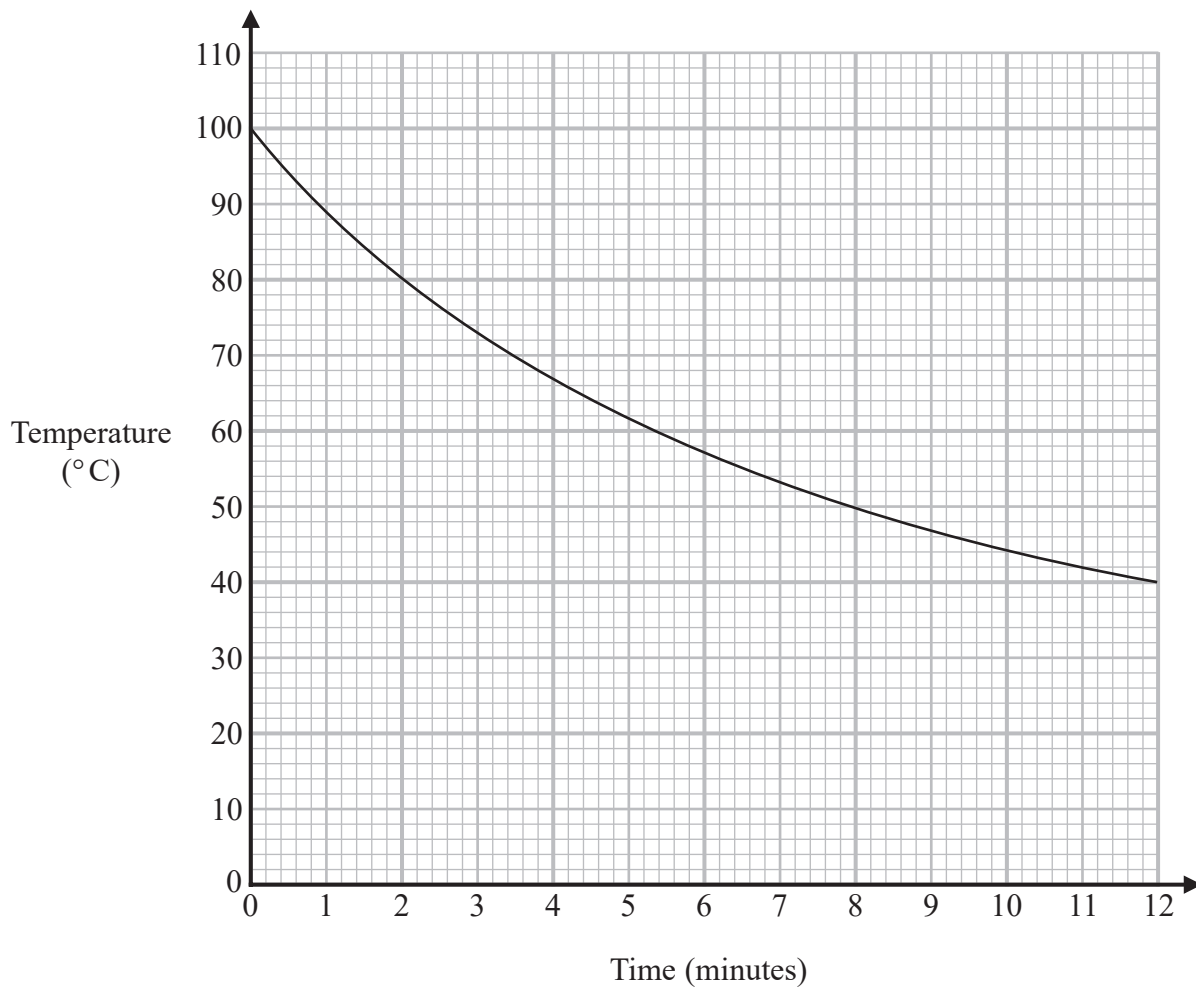
117 children had seats in the Circle.

There are exactly 2600 seats in the theatre.

On this Saturday, were there people on more than 60% of the seats?
You must show how you get your answer.

(Total for Question 18 is 5 marks)

19 The graph shows information about the time, in minutes, a liquid has been cooling and the temperature of the liquid in °C.



(a) What is the temperature of the liquid at time 2 minutes?

..... °C
(1)

Pam recorded the time when the liquid had a temperature of 50°C.

(b) Write down this time.

..... minutes
(1)

Pam says that the temperature of the liquid drops more in the first 3 minutes of cooling than it does between time 9 minutes and time 12 minutes.

(c) Is Pam correct?

Give a reason for your answer.

.....

.....

.....

(1)

(Total for Question 19 is 3 marks)

20 Maisie knows that she needs 3 kg of grass seed to make a rectangular lawn 5 m by 9 m.

Grass seed is sold in 2 kg boxes.

Maisie wants to make a rectangular lawn 10 m by 14 m.

She has 5 boxes of grass seed.

- (a) Has Maisie got enough grass seed to make a lawn 10 m by 14 m?
You must show all your working.

(4)

Maisie opens the 5 boxes of grass seed.

She finds that 4 of the boxes contain 2 kg of grass seed.

The other box contains 1 kg of grass seed.

- (b) Does this affect whether Maisie has enough grass seed to make her lawn?
Give a reason for your answer.

(1)

(Total for Question 20 is 5 marks)