

# Maths Take-Away Menu

## Number

### Checking calculations

Choose the correct answer to

$$54 \times 265$$

from the following:

23 360, 14 310, 15 606, 10 940, 19 025

You must justify your answer.

£2

### Calculating with Decimals

Ewan knows that  $23 \times 168 = 3864$ .

He uses this to find the answers to:

A  $2.3 \times 16.8$

B  $3864 \div 230$

C  $230 \times 1.68$

Which question gave him the largest answer ?

£2

### Standard form

Work out  $(7 \times 10^4)^2$ .

Give your answer in the standard form.

£2

### Perfect Square

Explain why  $240 \times 15$  is a perfect square.

£2

### Working with money

Gio goes shopping and buys 6 DVDs priced at £3.85 each.

£2

### Indices

Find the value of  $n$  when  $3^4 - 2^n = 7^2$

£3

What is an efficient way of calculating the total cost of the DVDs mentally?

### Using a Calculator

Use a calculator to work out

£2

### Standard Form

Hannah is asked to find the distance from the earth to the moon in kilometres. Her answer must be written in standard form.

£2

$$\frac{44.3 - 26.9}{5.2^2 + 9.8}$$

Give your answer correct to 2 significant figures.

Why is her answer of  $38.44 \times 10^4$  km incorrect?

### Comparing

Prove that  $\frac{5}{8} > 62\%$

£2

### Drinks

These mixed questions will make a great accompaniment to your meal.



### Calculating with Mixed Numbers

Find the value of  $a$  if

$$4\frac{3}{7} - a = 2\frac{2}{21}$$

£2

### Highest Common Factor

Find the Highest Common Factor of 108 and 180.

£3

Thank you for ordering your food with us.

We hope you have enjoyed your meal.

Please come back again soon.



GCSE Mathematics  
Foundation Tier

## Using this Take-Away Menu

For each sitting you will need to choose a Starter, Main Course, Dessert & Drink.

The prices vary for each course.



This symbol indicates that a calculator may be used when answering the question.

Remember to ensure that you show your workings clearly.

If you have any questions don't forget to ask your waiter (that's your teacher).

Enjoy your meal!

## Starters

These are quick questions designed to warm you up and get your appetite for maths going!



### Roots

Find the cubed root of 125

£1

### Negative Numbers

Calculate  $9 - (-23)$

£1

### Order of Operations

Find the value of  $5 \times (7 - 4)^2 + 24 \div 3$

£1

### Rounding



Write the answer to  $34.12 \div 0.53$  correct to 2 d.p.

£1

### Ordering decimals

Place the following in ascending order : 0.414, 0.4, 0.44, 0.14, 0.41, 0.441

£1

### Factors

Which of the following is not a factor of 64:

4, 8, 12, 16 ?

## Main Course

Your main dish is number based and is served with 'portions' from other areas of Maths or real life applications. These problem solving questions may take a bit more time to digest.



## Austrian Temperatures

The following table shows the lowest temperatures recorded in Austrian ski resorts last January.

Resort	Mayrhofen	Obergurgl	Söll	St Anton
Temperature (°C)	-3	-6	-0.5	...

Find the lowest recorded temperature at St Anton knowing that the mean temperature for the four resorts is  $-3.5^{\circ}\text{C}$ .

## Queuing

Harry is waiting at the end of a queue to buy the latest tablet. The queue is 150m long and each person in the queue takes up approximately 60cm of room when waiting in line. How many people are in front of Harry in the queue?

£1

## Examination Results

Marek receives his school report with his end of year examination results. Some of his results are given as percentages and others are written as a mark out of the total. He is also given a table to convert percentages to grades.

£1

SUBJECT	RESULT	%	GRADE
ENGLISH	$\frac{26}{40}$	85	A
GEOGRAPHY	72%	70	B
HISTORY	$\frac{12}{15}$	60	C
MATHEMATICS	78%	50	D
SCIENCE	$\frac{17}{25}$	35	E

£1

£1

£1

(a) What grades did Marek achieve in his subjects?

(b) Knowing that the Mathematics test was marked out of 150, how many more marks did Marek need to achieve a grade A?

## Buying Fruit

£4

Renee buys 1kg of fruit in her local shop.

A  $\frac{1}{4}$  of the fruit she buys are blueberries,  $\frac{2}{5}$  are raspberries and the remainder are blackberries.

She pays with a £20 note and gets £6.45 change. Knowing that the raspberries cost £1.30 per 100g and the blackberries are £1.10 per 100g, find the cost of the blueberries per 100g.

£3

## Space Travel

£4

The nearest star to the earth is the sun which is  $1.5 \times 10^8$  km away.

If a rocket travels from earth at a speed of  $4 \times 10^4$  km/h, how many hours will it take for the rocket to reach the sun?

£4

## Train Times

£3

The train to Bristol and the train to Birmingham both leave Worcester station at 09:55.

The train to Bristol leaves every 28 minutes and the train to Birmingham leaves every 16 minutes.

What will be the next time that both trains depart from Worcester at the same time?

£5

## Dessert

"The proof of the pudding is in the eating".

These questions are designed to test your understanding of key number concepts.



## Prime Number

£2

Explain why 243 is not a prime number