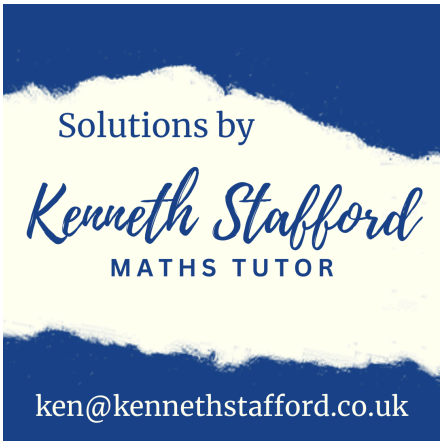
Name: SOLUTIONS

GCSE (1 - 9)

Writing an Expression



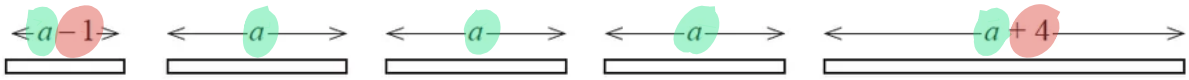


These questions are compiled from *released* Pearson Edexcel GCSE maths exam papers
They contain exam questions from up until the ***Summer 2023*** exam series
More recent exam papers do exist but are withheld for mock exams
As new exam papers are released these worksheets will gradually be updated
The ***most current*** version of these worksheets will always be available at: kennethstafford.co.uk

Question	Where the question appeared
1	Edexcel, GCSE, Autumn 2017, Paper 1F, Q6
2	Edexcel, GCSE, Autumn 2017, Paper 1F, Q24
3	Edexcel, GCSE, Autumn 2019, Paper 1F, Q28
4	Edexcel, GCSE, Autumn 2019, Paper 2F, Q18
5	Edexcel, GCSE, Summer 2017, Paper 3F, Q2
6	Edexcel, GCSE, Summer 2019, Paper 1F, Q13
7	Edexcel, GCSE, Summer 2019, Paper 2F, Q7
8	Edexcel, GCSE, Summer 2023, Paper 1F, Q18
9	Edexcel, GCSE, November 2022, Paper 2F, Q14

1

Here are five straight rods.



All measurements are in centimetres.

The total length of the five rods is L cm.

Find a formula for L in terms of a.
Write your formula as simply as possible.

$L = 5a + 3$

$L = 5a + 3$

(Total for Question 6 is 3 marks)

[Edexcel, GCSE, Autumn 2017, Paper 1F, Q6]

2

Kiaria is 7 years older than Jay.
Martha is twice as old as Kiaria.
The sum of their three ages is 77

Find the ratio of Jay's age to Kiaria's age to Martha's age.

Jay = x

Kiara = $x + 7$

Martha = $2(x+7) = 2x + 14$

$4x + 21 = 77$

$4x = 56$

$x = \frac{56}{4}$

$x = 14$

Jay = 14
Kiara = 21
Martha = 42
Total = 77

$4x + 21 = 77$

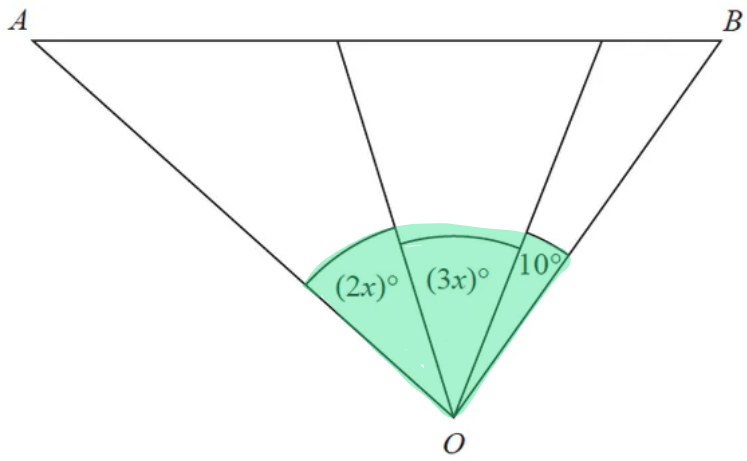
14 : 21 : 42 = 2 : 3 : 6

(Total for Question 24 is 4 marks)

[Edexcel, GCSE, Autumn 2017, Paper 1F, Q24]

3

The diagram shows triangle AOB.



Angle AOB is **not** an obtuse angle. less than 90

Find the greatest value of x.
You must show all your working.

$2x + 3x + 10 = 5x + 10$

$5x + 10 < 90$

$5x < 80$

$x < 16$

15 is the greatest value of x.

.....

(Total for Question 28 is 3 marks)

[Edexcel, GCSE, Autumn 2019, Paper 1F, Q28]

4

Ben is n years old.
Chloe is twice as old as Ben.
Dan is five years younger than Ben.

Ben = n
Chloe = $2n$
Dan = $n - 5$

The total of Ben's age, Chloe's age and Dan's age is T years.

(a) Find a formula for T in terms of n.

$T = 4n - 5$

$T = 4n - 5$

(3)

(b) In the table below, put a tick (✓) in the box next to the identity.

$3h + 2 = 14$	
$3a + 4b - 2c$	
$A = \pi r^2$	
$5m - 3m = 2m$	✓
$x + 7 \leqslant 12$	

(1)

(Total for Question 18 is 4 marks)

[Edexcel, GCSE, Autumn 2019, Paper 2F, Q18]

Writing an Expression (Questions from Edexcel GCSE Past Papers)

5

Cups are sold in packs and in boxes.

There are 12 cups in each pack.
There are 18 cups in each box.

Alison buys p packs of cups and b boxes of cups.

Write down an expression, in terms of p and b, for the total number of cups Alison buys.

$p \times 12 = 12p$

$b \times 18 = 18b$

$12p + 18b$

(Total for Question 2 is 2 marks)

[Edexcel, GCSE, Summer 2017, Paper 3F, Q2]

6

The length of a line is x centimetres.

Write down an expression, in terms of x, for the length of the line in millimetres.

$5cm = 50mm$

$10x$

(Total for Question 13 is 1 mark)

[Edexcel, GCSE, Summer 2019, Paper 1F, Q13]

7

There are y boats on a lake.
There are 7 people in each boat.

Write an expression, in terms of y, for the total number of people in the boats.

$7y$

(Total for Question 7 is 1 mark)

[Edexcel, GCSE, Summer 2019, Paper 2F, Q7]

8

Naomi has b bags of apples and c crates of apples.

There are 5 apples in each bag.
There are 28 apples in each crate.

Naomi has a total of T apples.

Write a formula for T in terms of b and c.

$T = 5b + 28c$

(Total for Question 18 is 3 marks)

[Edexcel, GCSE, Summer 2023, Paper 1F, Q18]

9

There are x sweets in a box.

There are y sweets in a packet.

(c) Write an expression, in terms of x and y, for the total number of sweets in 3 boxes and 2 packets.

$3x + 2y$

(2)

(Total for Question 14 is 7 marks)

[Edexcel, GCSE, November 2022, Paper 2F, Q14]