

GCSE

# Mathematics: Non Calculator

Paper 4

Specification EDEXCEL A

Name

**Time allowed**

- 30 minutes.

**For this paper you must have**

- A ballpoint pen with black ink.
- A ruler with millimetre measurements.

**Instructions**

- Do all rough work in this question booklet.
- Answer **all** the questions.
- You **must** show your working for all questions.

The maximum mark for this paper is 40.

Question	Mark
1	
2	
3	
4	
5	
6	
7	
8	
9	
TOTAL	

**Grade Boundaries**

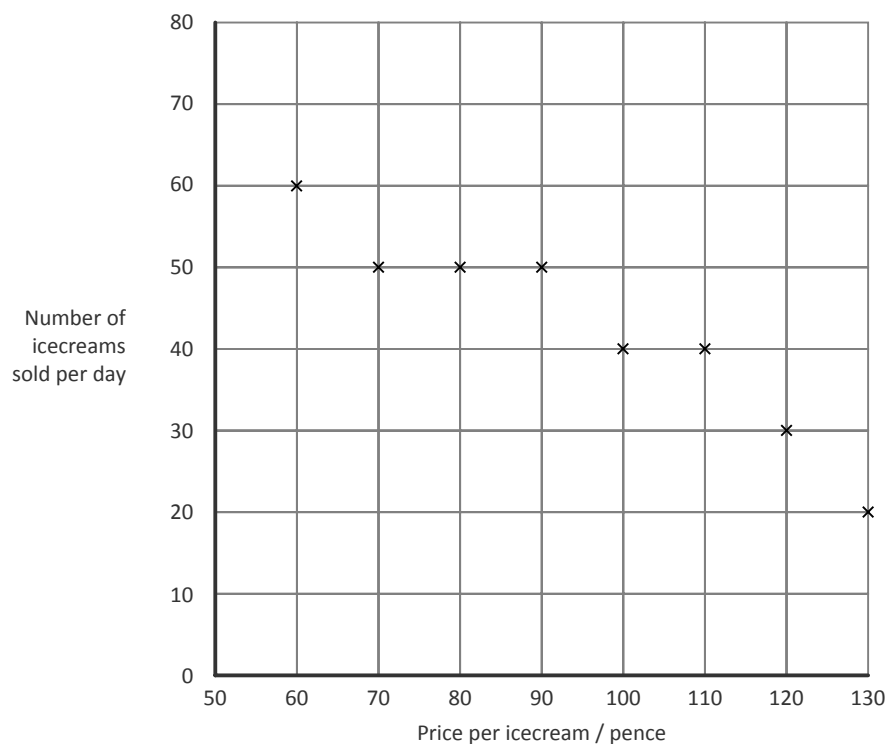
A\* 34  
A 29  
B 23  
C 16  
D 10

1. Complete the table to show the equivalent numbers, fractions and percentages.  
The first column has been done for you.

<b>Number</b>	0.5	0.05	
<b>Percentage</b>	50%		
<b>Fraction</b>	$\frac{1}{2}$		$\frac{1}{50}$

(4 marks)

2. The graph shows the relationship between the number of ice-creams sold in a day and the price each ice-cream was sold for.



- (a) What kind of correlation is shown on the graph?

(1 mark)

- (b) Draw a line of best fit on the graph and hence estimate the number of ice-creams which would be sold if they were priced at £1.05.

(2 marks)

3. Evaluate

(a)  $14 \times 23$

\_\_\_\_\_ (2 marks)

(b)  $\frac{3^2 - 7(-5)}{4}$

\_\_\_\_\_ (2 marks)

(c)  $\left(\frac{6^9}{6^3}\right)^{\frac{1}{6}}$

\_\_\_\_\_ (2 marks)

4. Given that  $y = \frac{2}{5}x - 5$ ,

(a) Calculate the value of  $y$  given that  $x = 5$ .

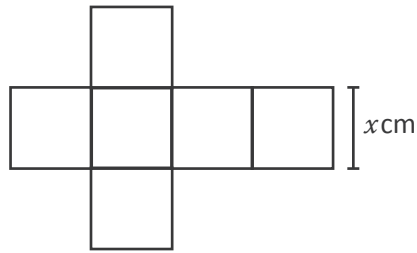
$y =$  ..... (2 marks)

(b) Calculate the value of  $x$  given that  $y = 3$ .

$x =$  ..... (2 marks)

Turn over for Question 5 ►

5. The net of a 3D shape is given below.



(a) Name the 3D object the net can be used to make.

\_\_\_\_\_ (1 mark)

(b) (i) The surface area of the 3D object is  $54\text{cm}^2$ .  
Use this information to calculate the length of  $x$ .

\_\_\_\_\_  $x = \dots\dots\dots$  (3 marks)

(ii) Hence, work out the volume of the 3D object.

\_\_\_\_\_ (1 mark)

6. Simplify

(a)  $n \times n + n$

\_\_\_\_\_ (1 mark)

(b)  $\frac{x^2 - x - 6}{x - 3}$

\_\_\_\_\_ (3 marks)

7. It takes 2 minutes for a car to travel 2400 metres along a road.  
You may assume that the car travels at a constant speed.

(a) Show that the speed of the car is 20 metres per second.

\_\_\_\_\_ (2 marks)

(b) The speed limit on the road is 60 kilometres per hour.  
Is the car breaking the speed limit?

\_\_\_\_\_ (3 marks)

Turn over for Question 8 ►

8. Line  $a$  has equation  $y = 2x + c$

(a) Write down the gradient of line  $a$ .

Gradient .....

(1 mark)

(b) Given that line  $a$  passes through the point  $(3, 4)$ , show that the value of  $c$  is  $-2$ .

(1 mark)

(c) Line  $b$  has a gradient of  $6$  and crosses the  $y$ -axis at  $-4$ .  
Calculate the coordinates of the point of intersection of line  $a$  and line  $b$ .

Coordinates of interception ( ..... , ..... )

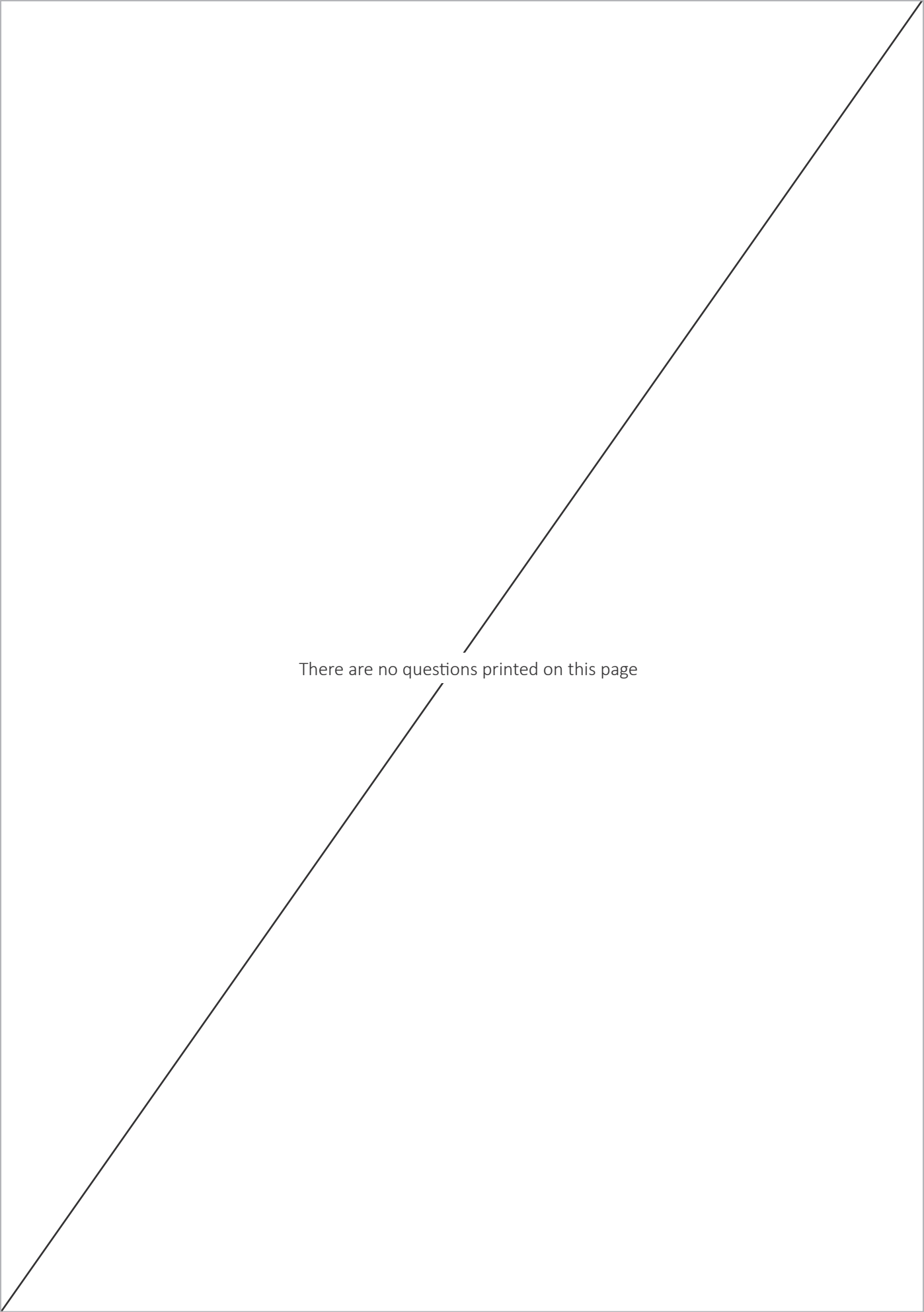
(4 marks)

9. Complete the table by putting ticks in the correct boxes to show whether each expression given can be used to work out a length, area or volume.

	$12x$	$(x + 6)(x - 1)$	$3x(x + 2)$
Length			
Area			
Volume			

(3 marks)

END OF QUESTIONS



There are no questions printed on this page