

Write your name here

Surname

Other names

**Rodillian Academy**  
**Level 1 / Level 2**  
**GCSE (9–1)**

Centre Number

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Candidate Number

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# Y8 Mathematics

## Examination Practice

**Practice Examination**

Paper Reference

**You must have:** Ruler graduated in centimetres and millimetres, protractor, pair of compasses, pen, HB pencil, eraser.  
Tracing paper may be used.

Total Marks

### Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.
- Answer the questions in the spaces provided  
– *there may be more space than you need.*
- You must **show all your working**.
- Diagrams are **NOT** accurately drawn, unless otherwise indicated.
- **Calculators may not be used.**



### Information

- The total mark for this paper is 75
- The marks for **each** question are shown in brackets  
– *use this as a guide as to how much time to spend on each question.*

### Advice

- This is revision so look back in your book for help if you are stuck
- [www.achildsguideto.com](http://www.achildsguideto.com)--> My Classes --> Year 8

Turn over ►

Q1 Write 380 as a product of prime factors

.....  
(2)

Q2 Estimate the value of  $\frac{39.928 \times 24.938 \times 2938.7}{308.4928 \times 83.918}$ . Write down the calculation you perform.

.....  
(2)

Q3 a Write 832 in standard form.

.....  
(1)

b Write  $7.4 \times 10^{-3}$  in ordinary form.

.....  
(1)

c Write 0.0432 in standard form.

.....  
(1)

d Write  $1.2645 \times 10^3$  in ordinary form.

.....  
(1)

Q4  $3\frac{1}{5} \div 2\frac{1}{8}$

.....  
(1)

Q5 Expand the following expressions

a  $4(3x + 7)$

.....  
(1)

b  $(9x + 5)(3x - 8)$

.....  
(2)

c  $(4x + 3)(3x - 2)(2x + 1)$

.....  
(3)

Q6 Factorise fully  $16x^2 + 12xy - 20x + 4x$

.....  
(2)

Q7 Solve  $5x + 8 = 43$

.....

(2)

Q8 The weight of an object is inversely proportional to the objects speed.

When an object weighs 5kg, its speed is  $20 \text{ ms}^{-1}$ .

What is the weight of an object whose speed is  $35 \text{ ms}^{-1}$ ?

.....

(3)

Q9 The altitude of an object is directly proportional to its temperature.

When the object is 2500m high, the temperature is 12°C.

What is the altitude of the object when the temperature is 37°C?

.....

(3)

Q10 a Fill in the table below showing the following:  $y = 4x + 3$  for  $-4 \leq x \leq 4$ .

X	-4	-3	-2	-1	0	1	2	3	4
Y									

b Fill in the table below showing the following:  $y = 5 - 2x$  for  $-5 \leq x \leq 3$ .

X	-5								
Y									

c Fill in the table below showing the following:  $y = 3x - 8$  for  $-7 \leq x \leq 1$ .

X									
Y									

(9)

Q11 The sequence below is a linear sequence.

8      14      20      26

a Write the next three terms in the sequence.

.....

(3)

b Write a rule describing what you need to do to find the next term in the sequence.

.....

(1)

c Write an expression for the  $n$ th term in the sequence.

.....

(3)

d Is the number 284 in the sequence described above?

.....

(2)

Q12 The sequence below is a linear sequence.

25    17    9

a Write the next three terms in the sequence.

.....

(3)

b Write a rule describing what you need to do to find the next term in the sequence.

.....

(1)

c Write an expression for the  $n$ th term in the sequence.

.....

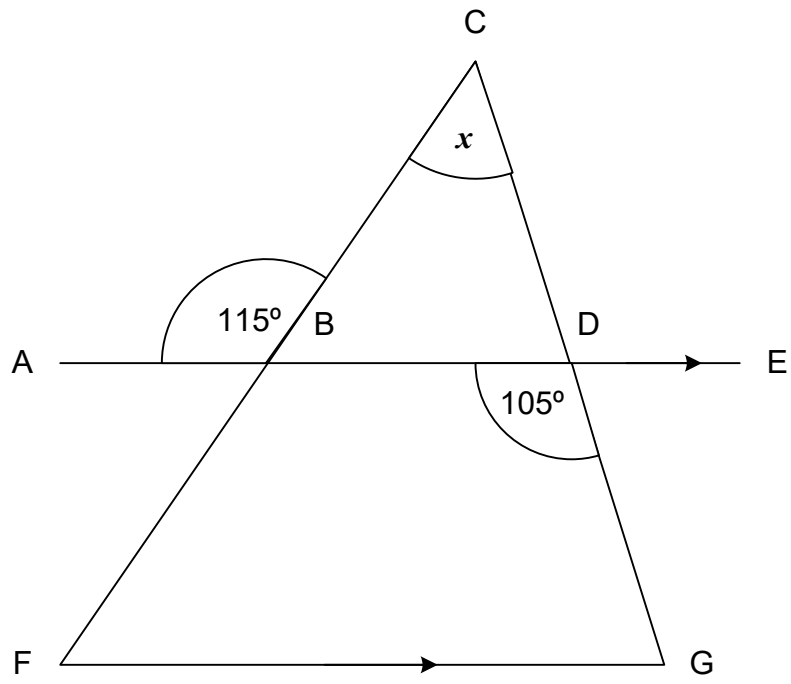
(3)

d Is the number 683 in the sequence described above?

.....

(2)

Q13 Find the value of  $x$ . You MUST provide reasons for your answer.

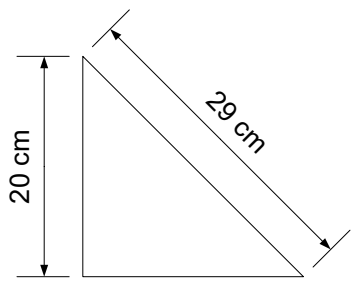


.....

(4)



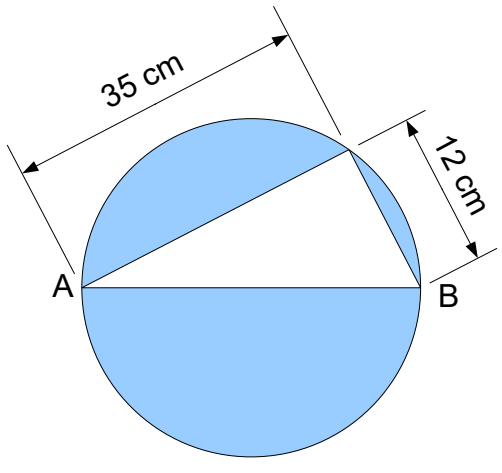
Q14 Find the area of the right angled below.



.....

(4)

Q15 AB is a diameter. Find the area of the shaded part of the shape below.



.....

(6)

Q16 Write 384 as a product of its prime factors.

.....

(2)

Q17 A bus and a train left the railway station at 8:00 am. The train's route took 45 minutes before it returned to the railway station. The bus' route took 72 minutes before it returned to the bus stop outside the railway station.

At what time were the bus and railway train both back at the railway station?

.....

(3)

Q18 Billy had £80. After a day at the races he had increased this by 75%. On a second day, he lost 25% of his remaining money. Did he have more money than that with which he had started?

You must show your working.

.....

(4)