Write your name here

Surname		Other names

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

Centre Number

Candidate Number

Y9 Mathematics

Practice Paper

**Thursday 15th May 2025**

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 be used.**
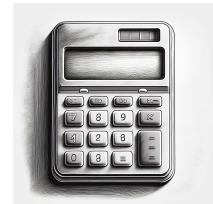
Information

- The total mark for this paper is 41
- 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

- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Try to answer every question.
- Check your answers if you have time at the end.

Q1   Write down all the prime numbers between 40 and 60.

....

(1)

Q2   Write down all the numbers on your calculator display.

$$\frac{16 - 2.84}{9.5231 \div 3.451} + \frac{11}{12}$$

....

(1)

Q3   23.9 has been rounded to one decimal place.

Write down the error interval for this number.

....

(2)

Q4   Find the value of x.

$$\frac{8x + 5}{4} = x - 6$$

....

(3)

Q5   Write the following as a single index

$$36^4 \times 216^3 \times 1296^2 =$$

....

(2)

Q6   Find the value of a.

$$\frac{\sqrt{a} \times a \times a^2}{a^3} = \frac{1}{4}$$

……………………………….

(3)

Q7   A car takes 45 minutes to travel 18 miles.

If a car travels at the same speed takes 55 minutes, how far would it go?
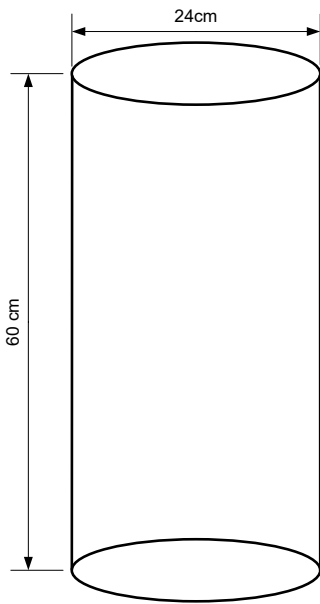
……………………………………….

(3)

Q8   A car has its price increased by 24%. The new price is £34,950. What was the original price of the car? Give your answer to the nearest penny.

……………………………………….

(2)

Q9   A block of copper, pictured below is put down on a table.

Copper has a density of 19.32 gcm^{-3}.

We calculate the density of the material by using $\rho = \dfrac{mass}{volume}$ and calculate pressure by $p = \dfrac{mass}{area}$

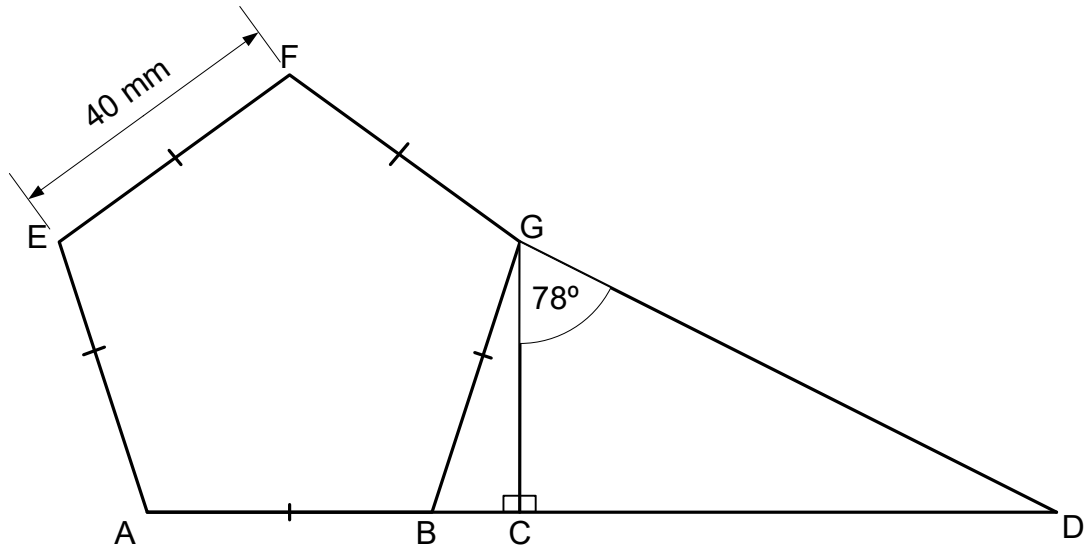What is the pressure does the block place on the table? You must show your working.

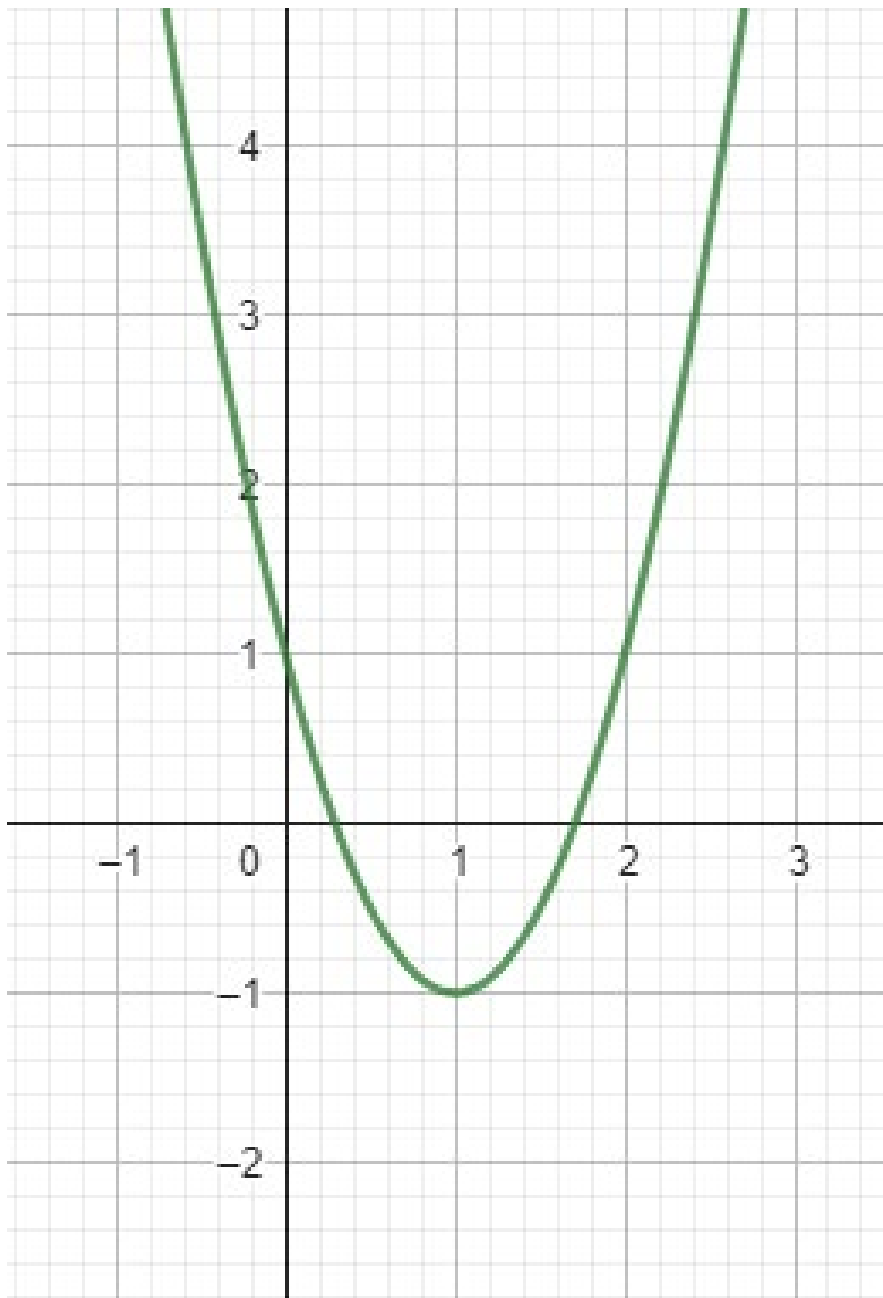...

(5)

Q10   ABGFE is a regular pentagon. ABCD is a straight line.

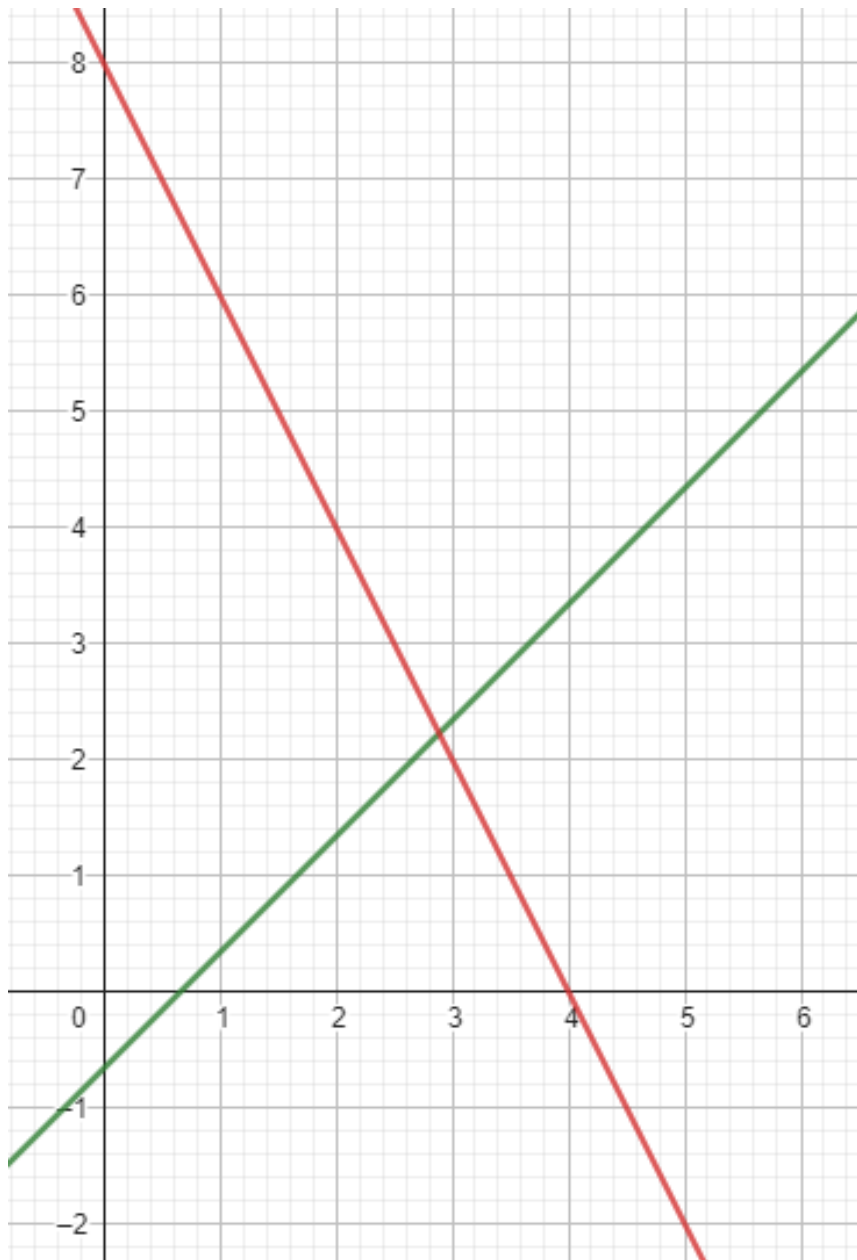Angle BCG and angle GCD are right angles.

What is the area of triangle CDG?

....

(5)

Q13 Using the graph, find the roots of the equation $2x^2 - 4x + 1 = 0$

....

(2)

Q12   Using the graph below, find solutions for x and y.

x ....

y ....

(2)

Q13   Solve by factorising $48x^2 + 26x - 14 = 0$

....

(4)

Q14   The two triangles below are similar.

Find the values of x and y.

....
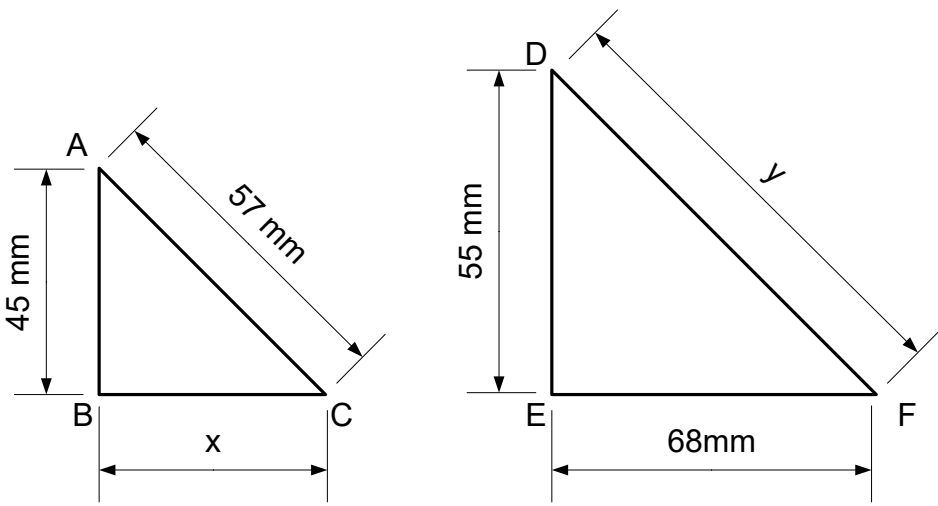
(2)

Q15   On the graph below, plot value for y derived from the inequality $-9 \le 3y < 5$

-4	-3	-2	-1	0	1	2	3	4	5
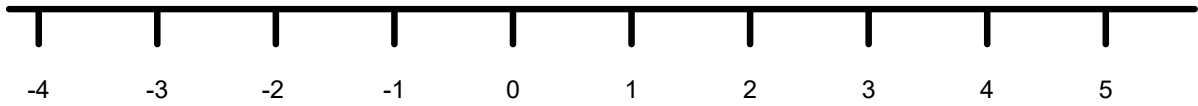
(2)

For the number line below, state the range of possible values of t.

-4	-3	-2	-1	0	1	2	3	4	5

....

(2)