

Write your name here

Surname

Other names

Pearson Edexcel
International GCSE

Centre Number

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Candidate Number

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Mathematics B

Paper 2



Thursday 4 June 2015 – Morning
Time: 2 hours 30 minutes

Paper Reference
4MB0/02

You must have: Ruler graduated in centimetres and millimetres, protractor, compasses, pen, HB pencil, eraser, calculator. 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.*
- **Calculators may be used.**

Information

- The total mark for this paper is 100.
- 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.
- Check your answers if you have time at the end.
- Without sufficient working, correct answers may be awarded no marks.

Turn over ►

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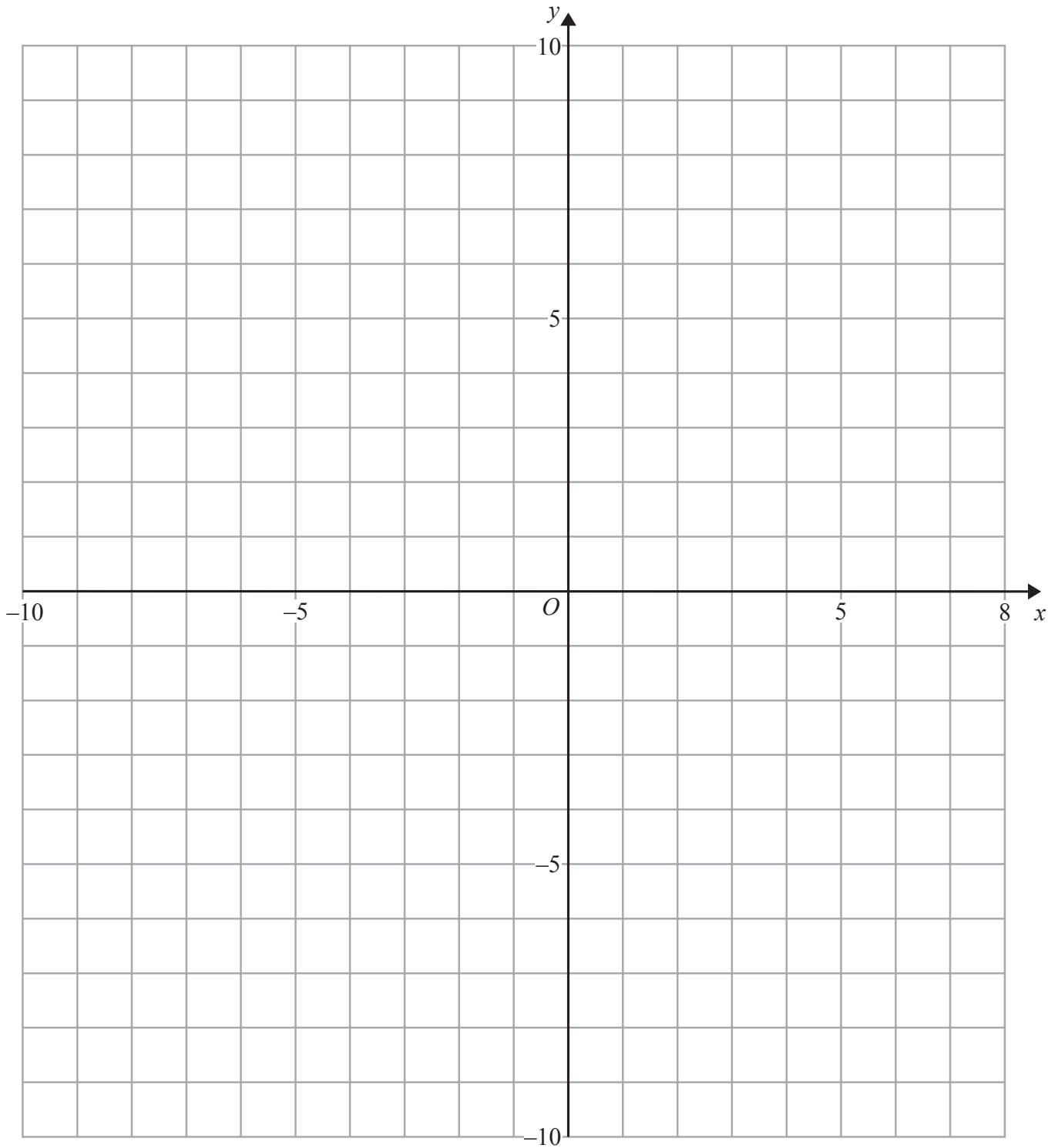
PEARSON

3 Solve $\frac{2}{x} - \frac{3}{x-2} = 5$

A series of horizontal dotted lines for writing the solution to the equation.



Question 8 continued

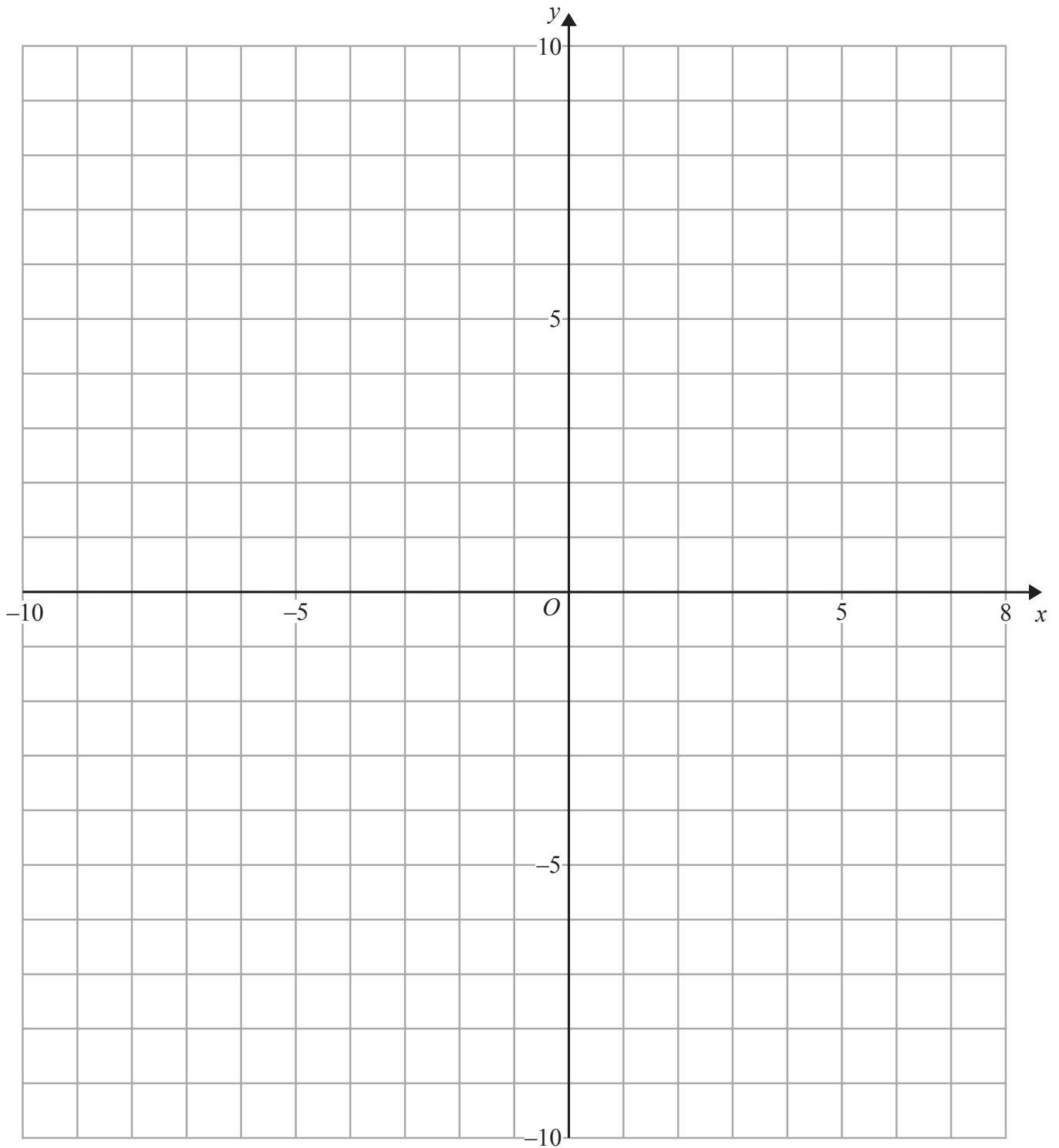


Use the grid on page 19 if you need to redraw your triangles.



Question 8 continued

Only use this grid if you need to redraw your triangles.



(Total for Question 8 is 11 marks)



Diagram **NOT** accurately drawn

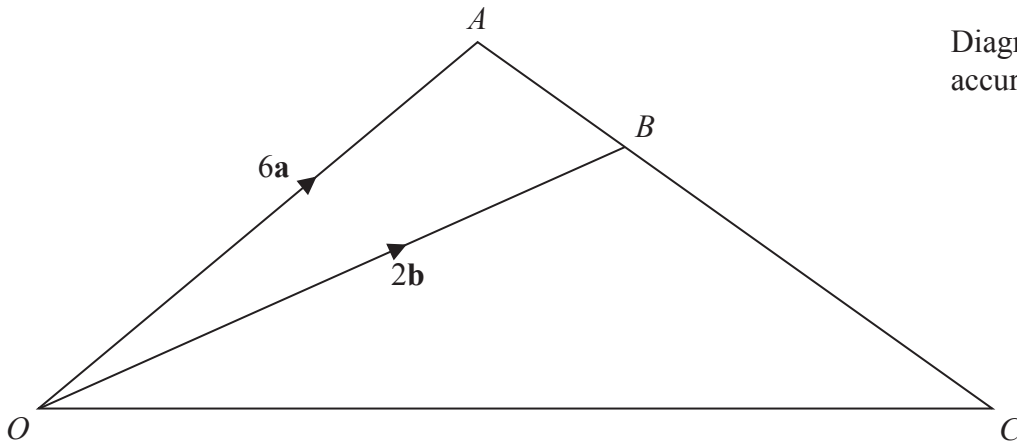


Figure 3

Figure 3 shows the triangle OAC with the point B on AC such that $AB : BC = 1 : 2$

The point P is on the line OA such that $OP : OA = 1 : 2$

Given that $\vec{OA} = 6\mathbf{a}$ and that $\vec{OB} = 2\mathbf{b}$

(a) find, in terms of \mathbf{a} and \mathbf{b} or \mathbf{a} or \mathbf{b} , simplifying your answer where possible,

(i) \vec{AB}

(ii) \vec{OP}

(iii) \vec{OC}

(4)

The point Q lies on OC such that $OQ : OC = 1 : m$

(b) Find \vec{PQ} in terms of m , \mathbf{a} and \mathbf{b} .

Simplify your expression.

(3)

Given also that PQ is parallel to AC ,

(c) find the value of m .

(3)

(d) Hence write down \vec{PQ} in terms of \mathbf{a} and \mathbf{b} .

(1)

The area of triangle OAC is 12 cm^2

(e) Calculate the area, in cm^2 , of $PACQ$.

(3)

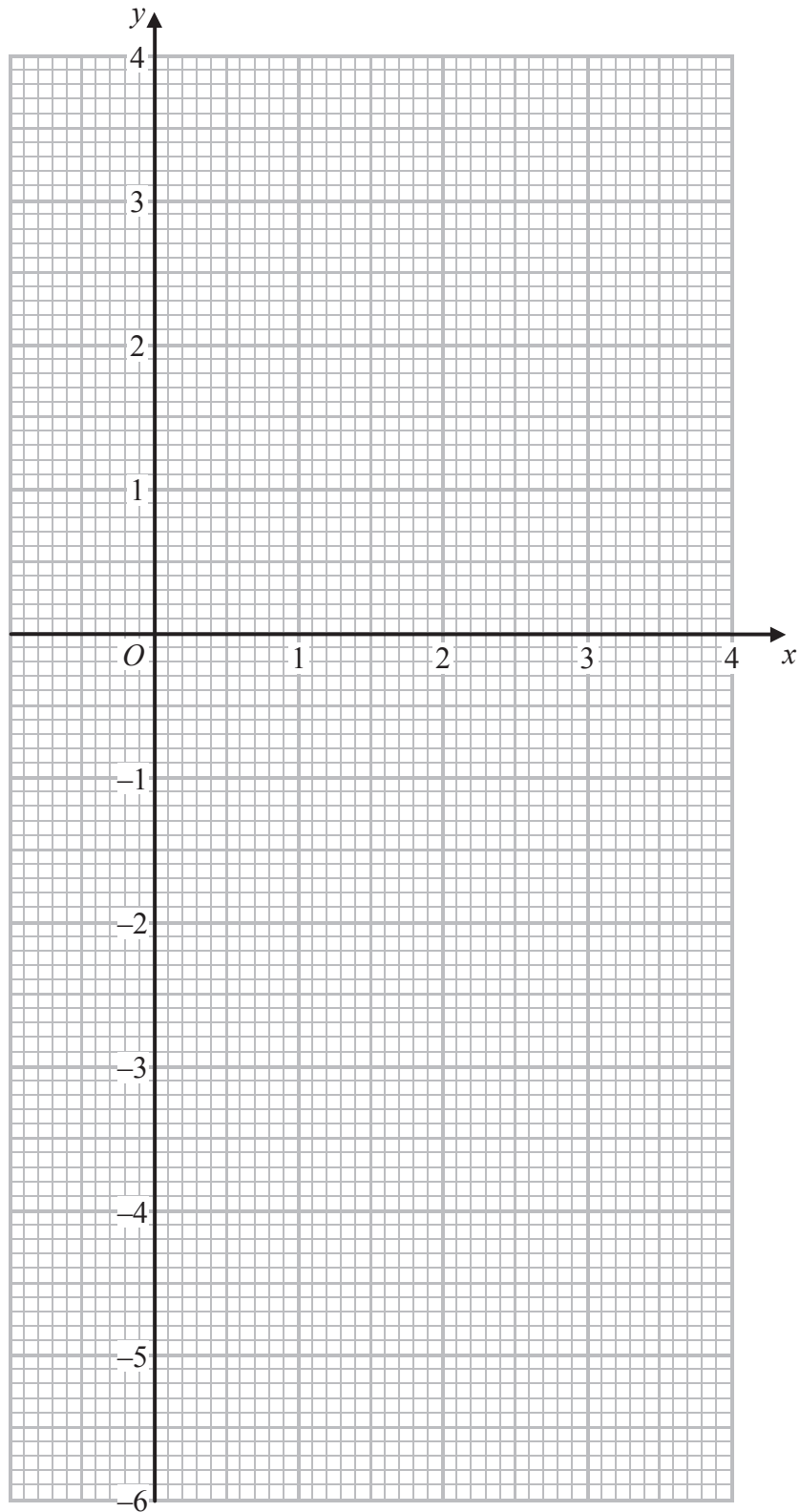
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Question 11 continued



Use the grid on page 31 if you need to redraw your curve.



Question 11 continued

Only use this page if you need to redraw your curve.

