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NZQA

NEW ZEALAND QUALIFICATIONS AUTHORITY
MANA TOHU MĀTAURANGA O AOTEAROA

For Supervisor's use only

Level 2 Mathematics, 2007

90287 Use coordinate geometry methods

Credits: Two

2:00 pm Thursday 29 November 2007

Check that the National Student Number (NSN) on your admission slip is the same as the number at the top of this page.

Make sure you have a copy of Formulae Sheet L2-MATHF.

You should answer ALL the questions in this booklet.

Show ALL working.

If you need more space for any answer, use the page(s) provided at the back of this booklet and clearly number the question.

Check that this booklet has pages 2–7 in the correct order and that none of these pages is blank.

YOU MUST HAND THIS BOOKLET TO THE SUPERVISOR AT THE END OF THE EXAMINATION.

For Assessor's use only	**Achievement Criteria**	
Achievement	**Achievement with Merit**	**Achievement with Excellence**
Use coordinate geometry methods. ☐	Solve problems involving coordinate geometry methods. ☐	Solve extended problems involving coordinate geometry methods. ☐
Overall Level of Performance ☐		

You are advised to spend 25 minutes answering the questions in this booklet.

Assessor's use only

QUESTION ONE

Calculate the distance between the points $(4,-5)$ and $(1,3)$.

QUESTION TWO

Find the coordinates of the point of intersection of the line $y = x - 5$ and the line $2x + 3y = 65$.

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QUESTION THREE

Find the equation of the line that is parallel to the line $y = \frac{2}{3}x + 1$ and passes through the point (2,5).

QUESTION FOUR

Find the value of k so that the points A(2,7), B(5, k) and C(9, –3) are collinear.
Plotting points is NOT sufficient.

QUESTION FIVE

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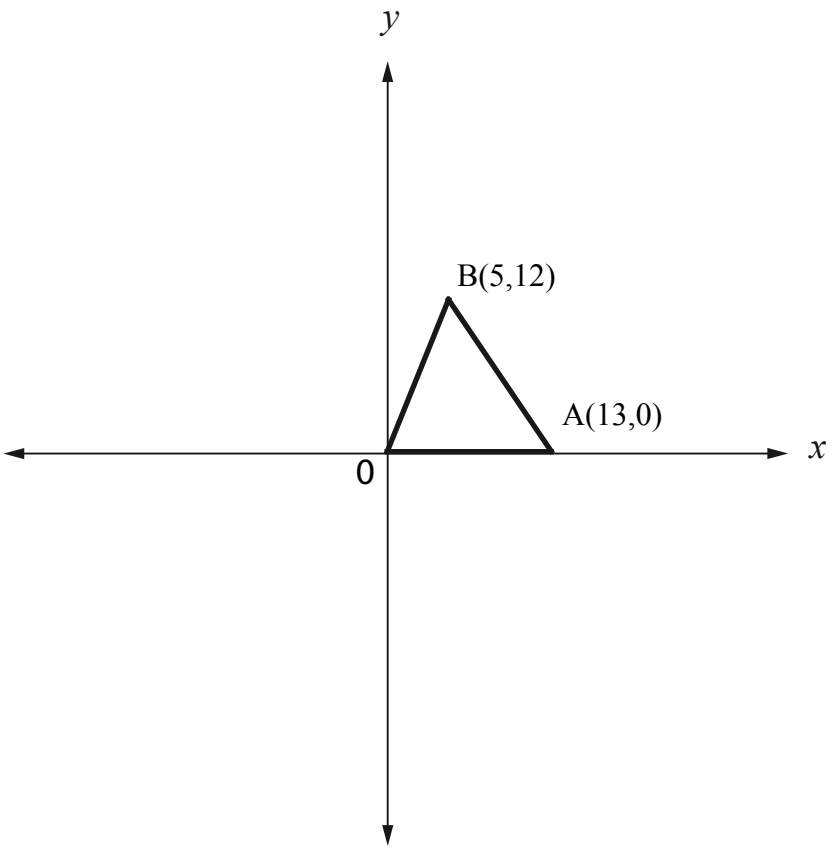
(a) Karl and Grant are making a kite.

They start drawing the kite on squared paper using the points O(0,0) A(13,0) and B(5,12) as three of the kite's vertices.

Show that OAB is an isosceles triangle.



(b) Karl and Grant do not know where to put the fourth vertex, but they know it is on the line through O perpendicular to AB.

Find the equation of this line.

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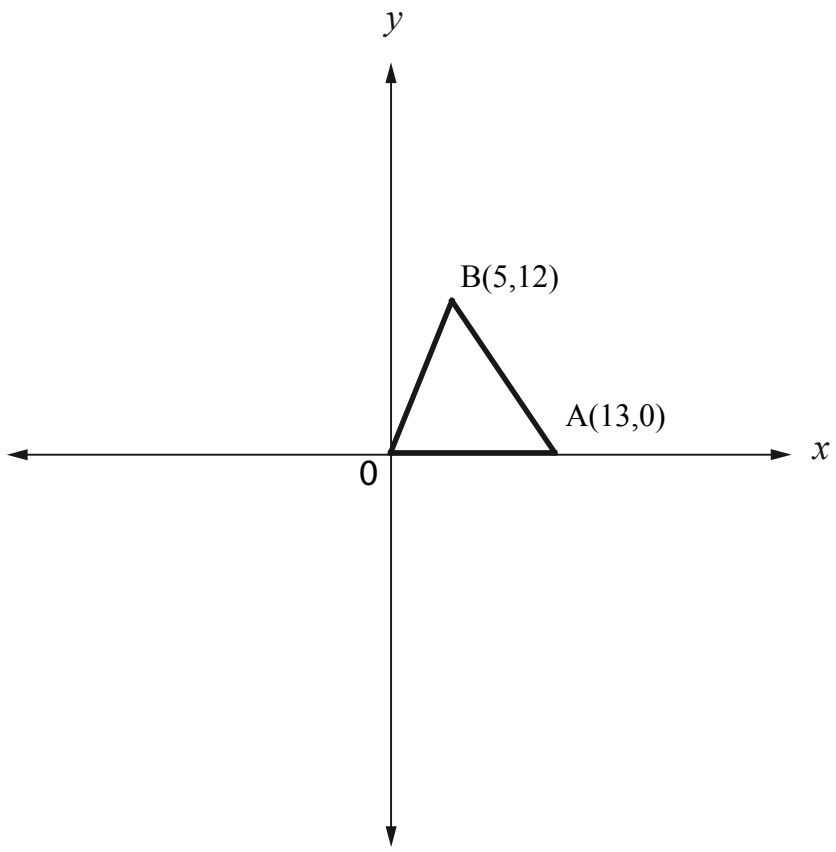

QUESTION SIX

Assessor's use only

Find the distance between the lines $4x + 3y = 5$ and $4x + 3y = 15$.

Extra paper for continuation of answers if required.
Clearly number the question.

Assessor's use only

Question number	

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