**End of Unit Test** Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Inequalities - HIGHER**

**1.** Dave and Helen attend the same school. Dave lives 5 km from the school.

Helen lives 3 km from the school. The distance between Dave’s house and

Helen’s house is km. Write, as an inequality, the minimum and maximum distance that could be.

Justify your answer in the space below. You may use a diagram if you wish.



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**(Total 3 marks)**

**2.**  is an integer.

        and

List the possible values of .

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Answer ......................................................................

**(Total 3 marks)**

**3.**  and are integers such that

   and

Work out the **largest** possible value of

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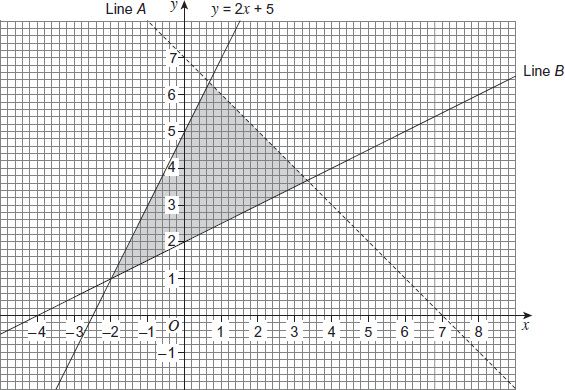
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Answer ......................................................................

**(Total 2 marks)**

**4.** Points in the shaded region satisfy three inequalities.

One of the inequalities is



(a) Circle the inequality with boundary line *A*.

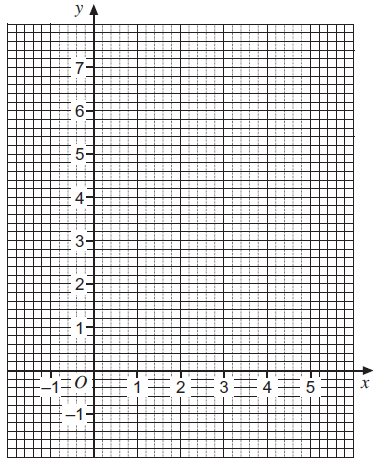
**(1)**

(b) Circle the inequality with boundary line *B*.

**(1)**

**(Total 2 marks)**

**5.** Put a label, R, in the region on the grid satisfied by all three of these inequalities.



**(Total 4 marks)**

**6.** Solve

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**(Total 3 marks)**

**7.** Solve

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**(Total 3 marks)**

**(Total for test = 20 marks)**