

Quadratic Inequality Graphs

Please write clearly in block capitals

Forename:

Surname:

Materials

For this paper you must have:

- mathematical instruments



You **can** use a calculator.

Instructions

- Use black ink or black ball-point pen. Draw diagrams in pencil.
- Fill in the boxes at the top of this page.
- Answer all questions.
- You must answer the questions in the spaces provided. Do not write outside the box around each page or on blank pages.
- Do all rough work in this book. Cross through any work you do not want to be marked.

Information

- The marks for questions are shown in brackets.
- You may ask for graph paper, tracing paper and more answer paper. These must be tagged securely to this answer book.

Advice

- In all calculations, show clearly how you work out your answer.

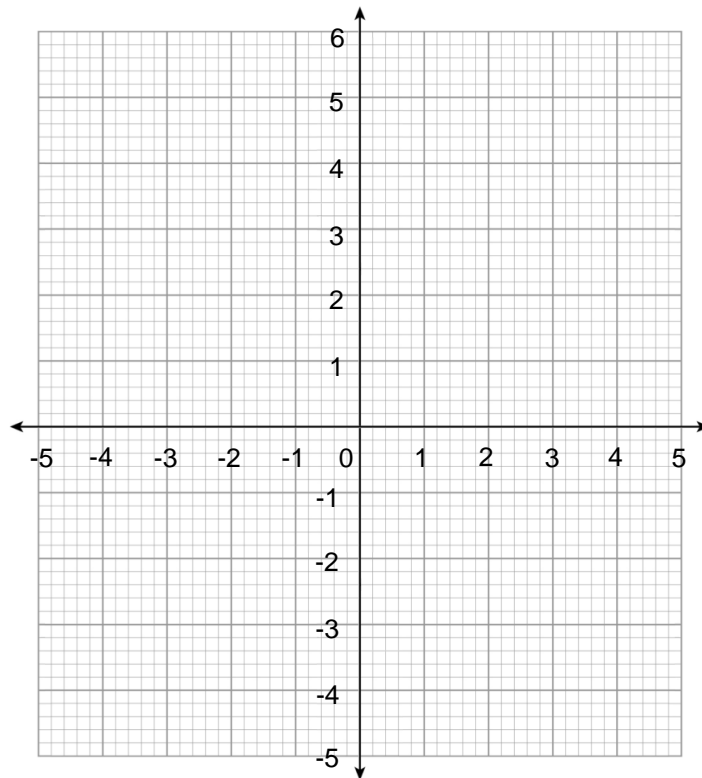
1(a) Factorise $x^2 - 4x + 3$

[2 marks]

Answer _____

1(b) Hence, solve $x^2 - 4x + 3 < 0$ graphically or otherwise.

[2 marks]



Answer _____

Turn over ►

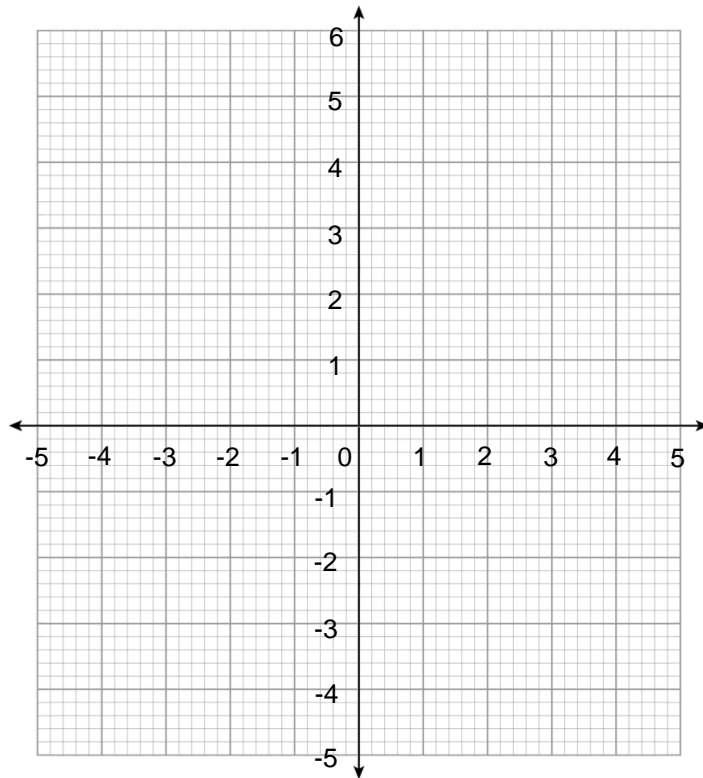
2(a) Factorise $m^2 + 5m + 4$

[2 marks]

Answer _____

2(b) Hence, $m^2 + 5m + 4 > 0$ graphically or otherwise.

[2 marks]



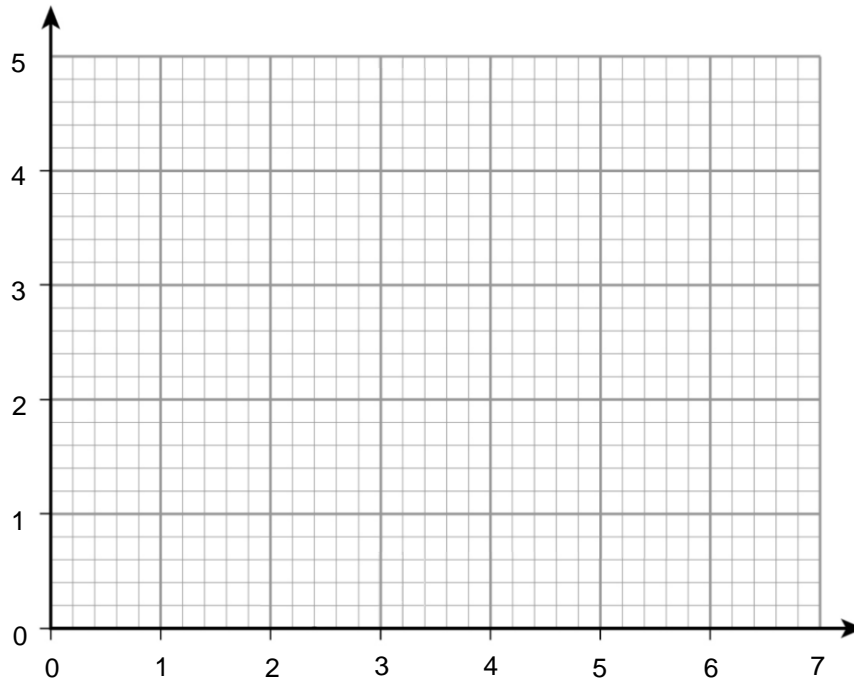
Answer _____

Turn over for next question

Turn over ►

3 Graphically, or otherwise, solve $x^2 - 6x + 9 > 0$.

[4 marks]

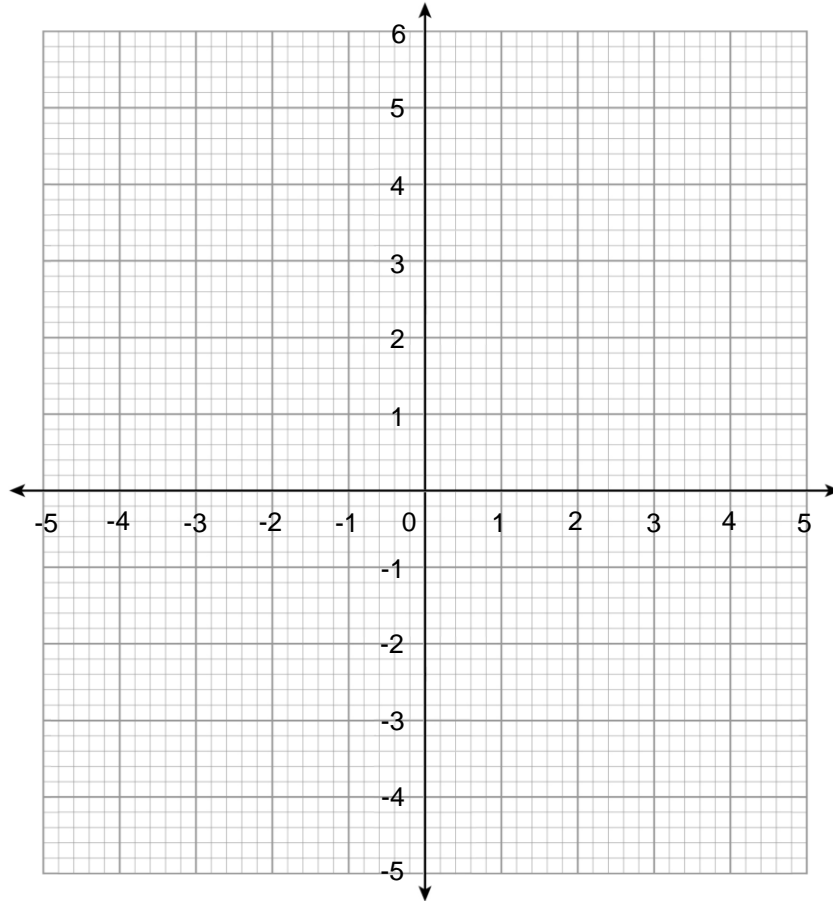


Answer _____

Turn over for next question

4 Graphically, or otherwise, solve $2k^2 + 3k - 2 > 0$.

[5 marks]



Answer _____

Turn over for next question

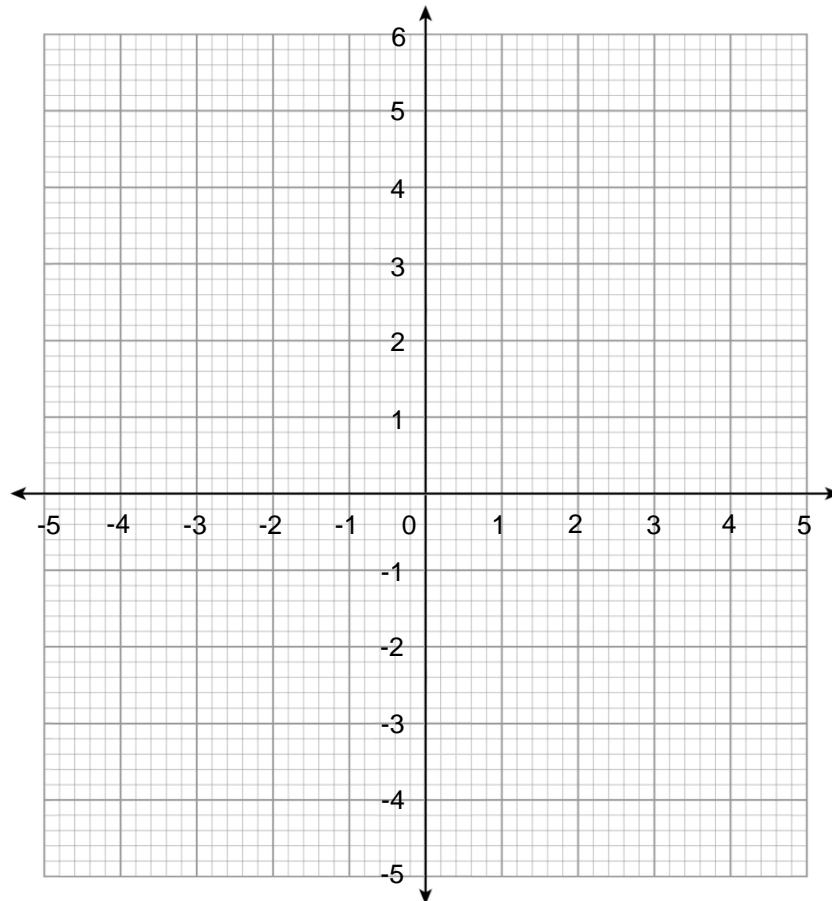
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5 Graphically, or otherwise, find the value(s) of x that satisfies the two inequalities:

$$x^2 + 4x > 0 ; \text{ and}$$

$$(x + 1)(3x - 2) > 0$$

[6 marks]



Answer _____

End of Questions

END