GCSE MATHEMATICS
AQA | Edexcel | OCR I WJEC

## Solving Quadratics Through Factorising

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.



3 Factorise and thus solve the following quadratic equations, finding both values of $x$ :
3(a)

$$
3 x^{2}+10 x-8=0
$$

Answer $\qquad$

3(b)

$$
3 x^{2}+39 x+126=0
$$

Answer $\qquad$

3(c)

$$
8 x^{2}+46 x+30=0
$$

$\qquad$
$\qquad$
Answer $\qquad$

3(d)

$$
8 x^{2}+10 x+56=7 x^{2}+67
$$

$\qquad$
$\qquad$
Answer $\qquad$

Turn over for next question

4 The triangular prism chocolate box shown below has a volume of $140 \mathrm{~cm}^{3}$


Not drawn accurately

Determine the only viable length of $x$.
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
Answer $\qquad$

End of Questions

