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## GCSE (1-9)

## Rearranging Harder Formula

## Instructions

- Use black ink or ball-point pen.
- Answer all questions.
- Answer the questions in the spaces provided
- there may be more space than you need.
- Diagrams are NOT accurately drawn, unless otherwise indicated.
- You must show all your working out.


## Information

- 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.
- Keep an eye on the time.
- Try to answer every question.
- Check your answers if you have time at the end

1 Make $u$ the subject of the formula $v=u+a t$

2 Make $a$ the subject of the formula $\mathrm{v}=\mathrm{u}+$ at

3 Make $u$ the subject of the formula $\mathrm{v}^{2}=\mathrm{u}^{2}+2$ as

4 Make $a$ the subject of the formula $v^{2}=u^{2}+2$ as

5 Make $a$ the subject of the formula $s=u t+\frac{1}{2} a t^{2}$
$\qquad$

6 Make $v$ the subject of the formula $\mathrm{T}=\frac{1}{2} \mathrm{mv}^{2}$
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7 Make $x$ the subject of the formula $2 x+a=b(x-2)$

8 Make $x$ the subject of the formula $x(2+a)=b(x+3)$

9 Make $x$ the subject of the formula $a=\frac{x+4}{x+2}$

10 Make $x$ the subject of the formula $a=\frac{x+c}{x-b}$

11 Make $x$ the subject of the formula $\frac{a}{b}=\frac{2 x}{x+5}$

12 Make $x$ the subject of the formula $a=\frac{4+2 b x}{2 x-3}$

13 Make $b$ the subject of the formula $\frac{1}{a}=\frac{1}{b}+\frac{1}{c}$

