



GCSE Foundation/Higher 10

Algebra



Mark scheme



21 minutes



18 marks

Inequalities

M1. (a) $S - 40$

$$\frac{S}{3} = t + \frac{40}{3}$$

M1

$$t = \frac{S - 40}{3}$$

oe

$$t = \frac{S}{3} - \frac{40}{3}$$

A1

(b) $3t < 70 - 40$

M1

$$t < 10$$

A1

[4]

M2. (a) Evidence of searching for a pattern or $10n$

$$\begin{array}{ccccccc} \text{eg,} & 100 & 110 & 120 & 130 & 140 \\ & 10 & 10 & 10 & 10 & \end{array}$$

M1

$$10n + 90$$

oe

A1

(b) $4n < 35$

$4n = 35$ leading to $n = 8.75$ is M0 unless n given as 8

M1

$$n < 35 \div 4 \text{ or } n < 8.75$$

$4n = 35$ leading to $n < 8.75$ is M1, A1

A1

$$n = 8$$

A1

[5]

- M3.** (a) $2x - 2, 2x \geq 1 - 3$
Allow > but not = unless recovered in answer
M1
- $x \geq -1$
Do not allow > in final answer.
A1
- (b) $x < 2, 2 > x < x < 2$
Condone alternative letters
B1
- $x = -1, 0, 1$
Follow through their inequalities for (a) and (b) unless part (b) is an "invented inequality" such as $x - 3 < 2$.
B1 ft
- [4]**

- M4.** (a) $23 - 2x = 15$
 $4.6 - 0.4x = 3$ gets M1 allow one error
M1
- $23 - 15 = 2x$
 $1.6 = 0.4x$ A1
A1
- 4
f.t. if M1 awarded.
A1 ft
- (b) $3x < 21$
 $3x = 21$ gets M1 iff recovered
M1
- $x < 7$
Must have inequality in answer.
Accept \leq .
A1
- [5]**

