



GCSE Foundation/Higher 10

Algebra



Questions



21 minutes



18 marks

Inequalities

- Q1.** (a) Rearrange the formula to make t the subject.

$$S = 3t + 40$$

.....

Answer

(2)

- (b) Solve $3t + 40 < 70$

.....

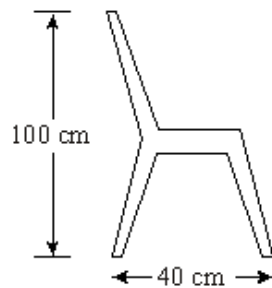
Answer

(2)

(Total 4 marks)

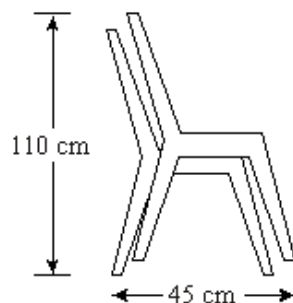
- Q2.** A stacking chair is 100 cm high and 40 cm wide.

Not drawn accurately



When a chair is added to a stack it increases the height by 10 cm and the width by 5 cm.

Not drawn accurately



- (a) Find an expression for the height of a stack of n chairs.

.....

Answer

(2)

- (b) A rule for the maximum number of chairs that can be stacked before they fall over is

$$4n + 35 < 70$$

What is the maximum number of chairs that can be stacked?

.....

.....

.....

.....

Answer

(3)
(Total 5 marks)

- Q3.** (a) Solve the inequality $2x + 3 \geq 1$

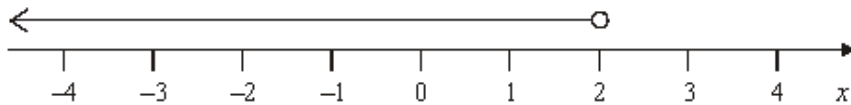
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.....

Answer

(2)

- (b) Write down the inequality shown by the following diagram.



.....

Answer

(1)

- (c) Write down all the integers that satisfy both inequalities shown in parts (a) and (b).

.....

Answer

(1)
(Total 4 marks)

Q4. (a) Solve the equation $\frac{23-2x}{5} = 3$

.....
.....
.....
.....

Answer $x =$

(3)

(b) Solve the inequality $3x + 8 < 29$

.....
.....
.....

Answer

(2)

(Total 5 marks)

