

Solving Inequalities

Question Paper

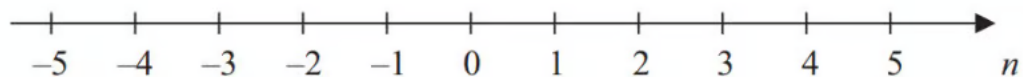
Course	Edexcel IGCSE Maths
Section	2. Equations, Formulae & Identities
Topic	Solving Inequalities
Difficulty	Medium

Time allowed: 80
Score: /65
Percentage: /100

Question 1a

$$-2 < n \leq 3$$

Represent this inequality on the number line.



[2 marks]

Question 1b

Solve the inequality $8x - 3 \geq 6x + 4$

[2 marks]

Question 2a

$$-5 < y \leq 0$$

y is an integer.

Write down all the possible values of y .

[2 marks]

Question 2b

Solve $6(x - 2) > 15$

[2 marks]

Question 3a

m is an integer such that $-2 < m \leq 3$

Write down all the possible values of m .

[2 marks]

Question 3b

Solve $7x - 9 < 3x + 4$

[2 marks]

Question 4a

Solve $6x + 4 > x + 17$

[2 marks]

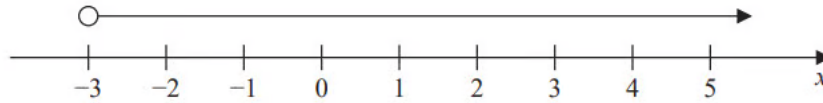
Question 4b

n is an integer with $-5 < 2n \leq 6$

Write down all the values of n

[2 marks]

Question 5a



Write down the inequality shown on the number line.

[1 mark]

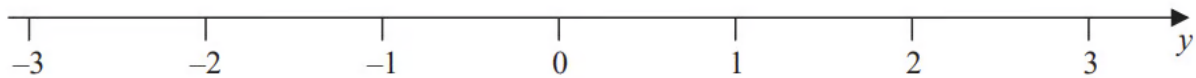
Question 5b

Solve the inequality $4y - 13 \leq y + 8$

[2 marks]

Question 6a

On the number line, show the inequality $-2 \leq y < 1$



[2 marks]

Question 6b

n is an integer.

Write down all the values of n that satisfy $-3.4 < n \leq 2$

[2 marks]

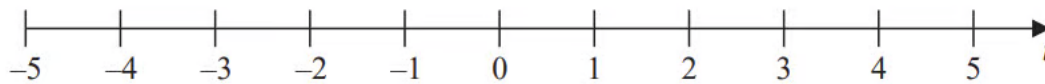
Question 7a

Solve the inequality $7t - 8 < 2t + 7$

[3 marks]

Question 7b

On the number line below, represent the solution set of the inequality solved in part (a).



[1 mark]

Question 8

Solve the inequality $7t - 3 \leq 2t + 31$

Show your working clearly.

[2 marks]

Question 9

Solve the inequality $3x + 15 < 8x + 3$

Show clear algebraic working.

[3 marks]

Question 10

Solve the inequality $2q \geq 31 - 3q$

[2 marks]

Question 11

Solve $4 > 11 - \frac{x}{3}$

[2 marks]

Question 12

x is an integer.

$$-4 < x \leq 2$$

and

$$2 \leq x + 3 < 9$$

Work out all the possible values of x .

[3 marks]

Question 13

Solve $8 > 3 - \frac{1}{2}x$

[2 marks]

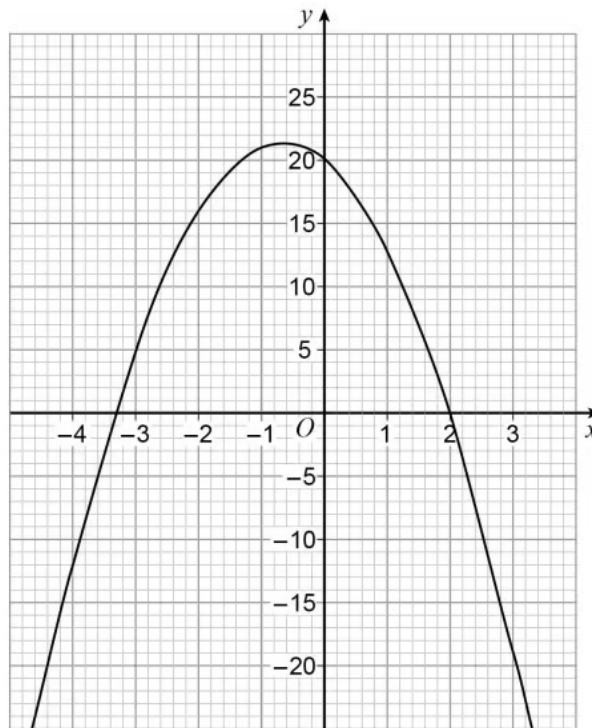
Question 14

Solve $7x + 6 > 1 + 2x$

[2 marks]

Question 15

Here is the graph of $y = f(x)$ where $f(x)$ is a quadratic function.



Write down all the **integer** solutions of $f(x) \geq 0$

[2 marks]

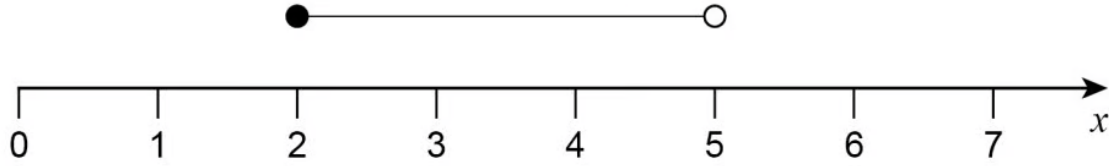
Question 16a

Solve $5x + 6 > 3x + 15$

[3 marks]

Question 16b

Write down the inequality represented by the number line.



[2 marks]

Question 17

$$m^2 > 9$$

Circle the possible value of m .

$$2\frac{7}{8}$$

$$2.8$$

$$3$$

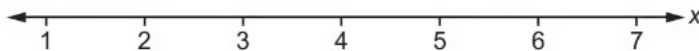
$$-\frac{7}{2}$$

[1 mark]

Question 18

$$\text{Solve } 3x + 4 < 19.$$

Show your solution on the number line.

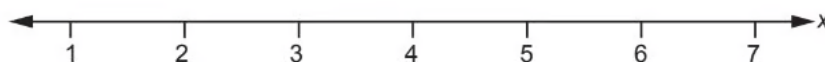


[4 marks]

Question 19

Solve $3x - 5 \geq 10$

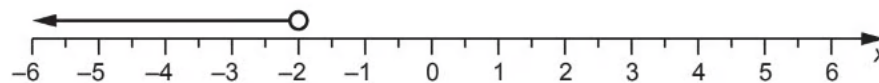
Show your solution on the number line.



[4 marks]

Question 20

Gemma's solution to the inequality $3x + 1 > -5$



Is Gemma's solution correct?
Explain your reasoning.

[3 marks]

Question 21

Solve.

$$5x + 1 > x + 13$$

[3 marks]