

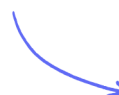
Exam Questions

Solving Inequalities

Interpreting Inequalities / Representing Inequalities on a Number Line / Solving Linear Inequalities

Easy (7 questions)	/12
Medium (9 questions)	/20
Hard (6 questions)	/15
Total Marks	/47

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Easy Questions

1 Solve $3x < 12$

(1 mark)

2 n is an integer.

$$-1 \leq n < 4$$

List the possible values of n .

(2 marks)

3 $-3 < n \leq 1$

n is an integer.

Write down all the possible values of n .

(2 marks)

4 $-5 < y \leq 0$

y is an integer.

Write down all the possible values of y .

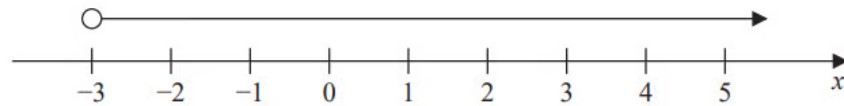
(2 marks)

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

Write down all the possible values of m .

(2 marks)

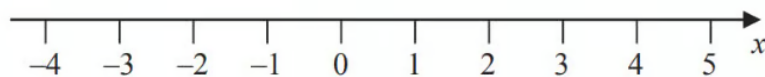
6



Write down the inequality shown on the number line.

(1 mark)

7 Show the inequality $x < 3$ on the number line below



(2 marks)

Medium Questions

1 Solve $8x - 13 \geq 11$

(2 marks)

2 Solve $\frac{7x}{3} < 6$

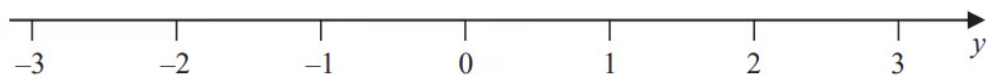
(2 marks)

3 (a) n is an integer.

Write down all the values of n such that $-2 \leq n < 3$

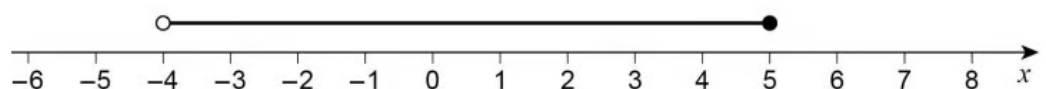
(2 marks)

(b) On the number line, represent the inequality $y \leq 1$



(1 mark)

4 Choose the inequality shown by the diagram.



A. $-4 \leq x < 5$

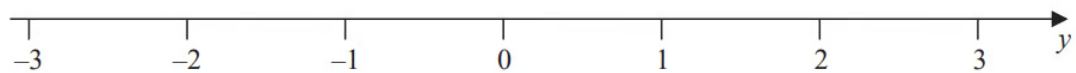
B. $-4 \leq x \leq 5$

C. $-4 < x < 5$

D. $-4 < x \leq 5$

(1 mark)

5 (a) On the number line, show the inequality $-2 \leq y < 1$



(2 marks)

(b) n is an integer.

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

(2 marks)

6 List all of the integers which satisfy **all three** of the following inequalities.

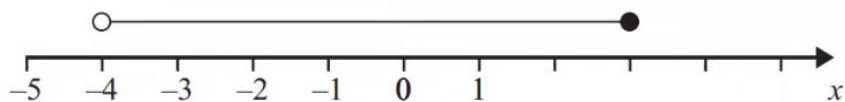
$$x \leq 8$$

$$x > 2$$

$$x > 3$$

(1 mark)

7 (a)



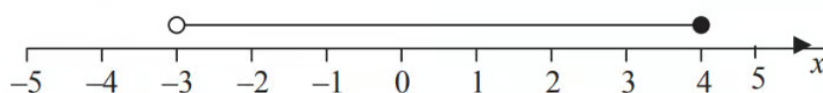
Write down the inequality shown in the diagram.

(2 marks)

(b) Solve $y - 2 > 5$

(1 mark)

8 Here is an inequality, in x , shown on a number line.

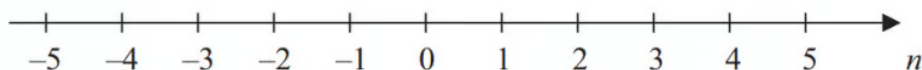


Write down the inequality.

(2 marks)

9 $-2 < n \leq 3$

Represent this inequality on the number line.



(2 marks)

Hard Questions

1 Solve $15x \leq 9x - 3$

(2 marks)

2 Solve $14x > 2(x + 8)$

(3 marks)

3 Solve $5n - 3 < 2n + 12$

(3 marks)

4 $m^2 > 9$

Choose the possible value of m .

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

B. 2.8

C. 3

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

(1 mark)

5 List all of the integers which satisfy **all three** of the following inequalities.

$$x \leq 7$$

$$2 < x \leq 8$$

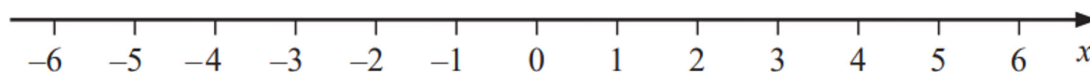
$$4 \leq x \leq 8.5$$

(1 mark)

6 (a) Solve $30m > 14m + 9$

(2 marks)

(b) On the number line below, show the set of values of x for which $-8 < 4x \leq 12$



(3 marks)