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1

(d) Solve the inequality  $4x + 7 > 2$

$$\begin{aligned} & \quad \quad \quad -7 \quad -7 \\ 4x + 7 & > 2 \\ \div 4 \quad & \quad \quad \div 4 \\ x & > \frac{-5}{4} \end{aligned}$$

(2)



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1

(b) Solve the inequality  $5x - 4 < 39$

$$\begin{aligned} & \quad \quad \quad +4 \quad +4 \\ 5x & < 33 \\ \div 5 & \quad \quad \div 5 \\ x & < \frac{33}{5} \end{aligned}$$

(2)



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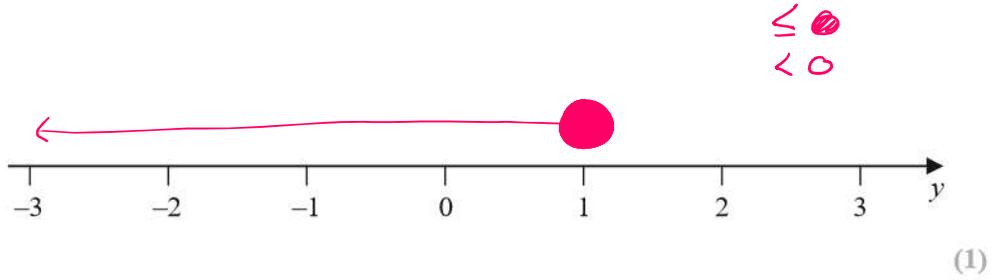
1  $n$  is an integer.

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

$-2$  ✓  $-1$  ✓  $0$  ✓  $1$  ✓  $2$  ✗  $3$  ✗

$-2 \quad -1 \quad 0 \quad 1 \quad 2$   
 -----  
 (2)

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



(Total for Question 1 is 3 marks)



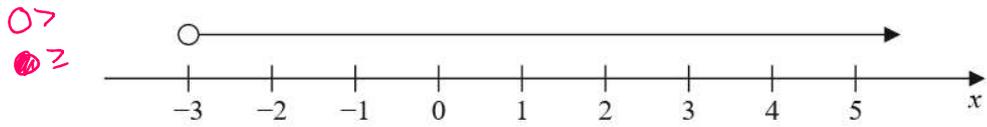
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1 (a)



Write down the inequality shown on the number line.

$$x > -3$$

(1)

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

$$\begin{array}{rcl}
 & -y & -y \\
 3y - 13 & \leq & 8 \\
 +13 & & +13 \\
 3y & \leq & 21 \\
 \div 3 & & \div 3 \\
 y & \leq & 7
 \end{array}$$

(2)

(Total for Question 1 is 3 marks)

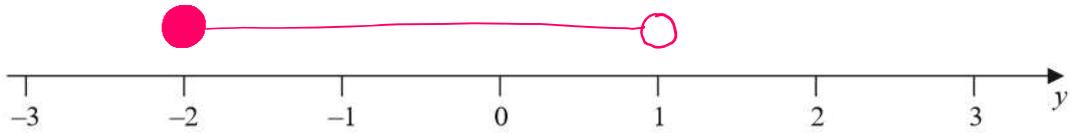


P 6 0 2 6 1 A 0 3 2 4

# January 2021 Paper 1HR

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

$\bullet \leq$        $< \circ$



(2)

$n$  is an integer. *← whole number*

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

*-3 -2 -1 0 1 2*

*-3, -2, -1, 0, 1, 2*

(2)

(Total for Question 3 is 4 marks)



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3  $-8 < 2y \leq 2$

$y$  is an integer.

(a) Find all the possible values of  $y$

$$-8 < 2y \leq 2$$

$$\div 2$$

$$-4 < y \leq 2$$

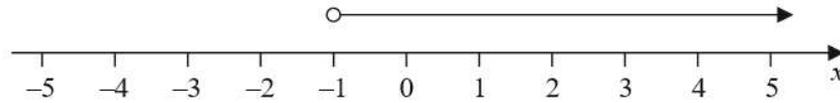
$$-4, -3, -2, -1, 0, 1, 2$$

$$\underline{-3 \quad -2 \quad -1 \quad 0 \quad 1 \quad 2}$$

(2)

(b) Write down the inequality shown on the number line.

$$\begin{matrix} x > \\ 0 > \end{matrix}$$



$$x > -1$$

(1)

(Total for Question 3 is 3 marks)



P 7 2 4 4 4 A 0 5 3 2

3 (a) Solve  $4y + 5 > 12$

$$\begin{array}{r} -5 \quad -5 \\ 4y > 7 \\ \div 4 \quad \div 4 \\ y > \frac{7}{4} \end{array}$$

(2)

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# January 2022 Paper 1H

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6 (a) Solve the inequality  $5x - 7 \leq 2$

$$\begin{array}{r} +7 \quad +7 \\ 5x \leq 9 \\ \div 5 \quad \div 5 \\ x \leq \frac{9}{5} \end{array}$$

(2)



P 6 9 1 9 6 A 0 7 2 8

7

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(d) Solve the inequality  $7 - 2y < 3y - 12$

$$\begin{array}{rcl} & +2y & +2y \\ 7 & < & 5y - 12 \\ +12 & & +12 \\ 19 & < & 5y \\ \div 5 & & \div 5 \\ \frac{19}{5} & < & y \end{array}$$

.....  
(3)

8



P 7 3 4 6 6 A 0 8 2 4



7  $-4 \leq 2y < 6$

$y$  is an integer.

(a) Write down all the possible values of  $y$ .

$$\begin{aligned}
 -4 &\leq 2y < 6 \\
 &\div 2 \\
 -2 &\leq y < 3 \\
 &\checkmark \quad \times \\
 -2 &-1 \quad 0 \quad 1 \quad 2 \quad 3 \\
 &\dots\dots\dots -2, -1, 0, 1, 2 \\
 &\quad\quad\quad (2)
 \end{aligned}$$

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

Show your working clearly.

$$\begin{aligned}
 7t - 3 &\leq 2t + 31 \\
 -2t &\quad -2t \\
 5t - 3 &\leq \quad +31 \\
 &\quad +3 \quad +3 \\
 5t &\leq \quad 34 \\
 \div 5 &\quad \div 5 \\
 t &\leq \quad \frac{34}{5}
 \end{aligned}$$

(2)

(Total for Question 7 is 4 marks)

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8

(b) Solve the inequality  $7 < 4x - 1 \leq 17$

$$+1$$

$$8 < 4x \leq 18$$

$$\div 4$$

$$2 < x \leq \frac{18}{4}$$

(3)

(Total for Question 8 is 5 marks)



8

- (b) Solve the inequality  $3y + 5 > 7y - 10$   
Show clear algebraic working.

$$\begin{aligned} 3y + 5 &> 7y - 10 \\ -3y & \quad -3y \\ 5 &> 4y - 10 \\ +10 & \quad +10 \\ 15 &> 4y \\ \div 4 & \quad \div 4 \\ \frac{15}{4} &> y \end{aligned}$$

(3)

10



P 7 5 9 3 4 A 0 1 0 2 8



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8 (a) Solve the inequality  $8x - 4 \geq 3x - 10$

$$\begin{array}{rcl}
 & -3x & -3x \\
 8x - 4 & \geq & 3x - 10 \\
 +4 & & +4 \\
 5x & \geq & -6 \\
 \div 5 & & \div 5 \\
 x & \geq & \frac{-6}{5}
 \end{array}$$

(2)

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# November 2021 P1H

9 (i) Solve the inequalities  $-7 \leq 2x - 3 < 5$

$$\begin{aligned} &+3 \\ -4 &\leq 2x < 8 \\ &\div 2 \\ -2 &\leq x < 4 \end{aligned}$$

(3)

(ii) On the number line, represent the solution set to part (i)



(2)

(Total for Question 9 is 5 marks)



9

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(b) Solve the inequality  $3x + 15 < 8x + 3$ 

Show clear algebraic working.

$$3x + 15 < 8x + 3$$

$$-3x \quad -3x$$

$$15 < 5x + 3$$

$$-3 \quad -3$$

$$12 < 5x$$

$$\div 5 \quad \div 5$$

$$\frac{12}{5} < x$$

.....  
(3)

P 6 4 6 9 3 A 0 9 2 8

9

Turn over ►

## June 2022 Paper 1HR

9 Solve the inequality  $3 - 4x \leq 11$

$$\begin{aligned} & \quad \quad \quad +4x \quad \quad +4x \\ 3 & \leq 11 + 4x \\ -11 & \quad \quad -11 \\ -8 & \leq \quad \quad 4x \\ \div 4 & \quad \quad \quad \div 4 \\ -2 & \leq x \end{aligned}$$

(Total for Question 9 is 2 marks)

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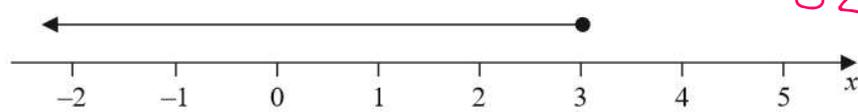
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10

(b) Write down the inequality shown on the number line



~~$x \leq$~~   
 $x <$

$x \leq 3$   
 -----  
 (1)

(c) Solve the inequality  $7w + 6 > 12w + 14$

$$\begin{aligned}
 & -7w \quad -7w \\
 & 6 > 5w + 14 \\
 & -14 \quad -14 \\
 & -8 > 5w \\
 & \div 5 \quad \div 5 \\
 & \frac{-8}{5} > w
 \end{aligned}$$

-----  
 (3)

(Total for Question 10 is 6 marks)

12

