

Workout

Question 1: Write out the following with either an $<$ or $>$ symbol

- (a) $8 \square 6$ (b) $2 \square 3$ (c) $7 \square 10$ (d) $5 \square 0$
 (e) $4 \square -1$ (f) $-4 \square 6$ (g) $9 \square 9.4$ (h) $0 \square -1$

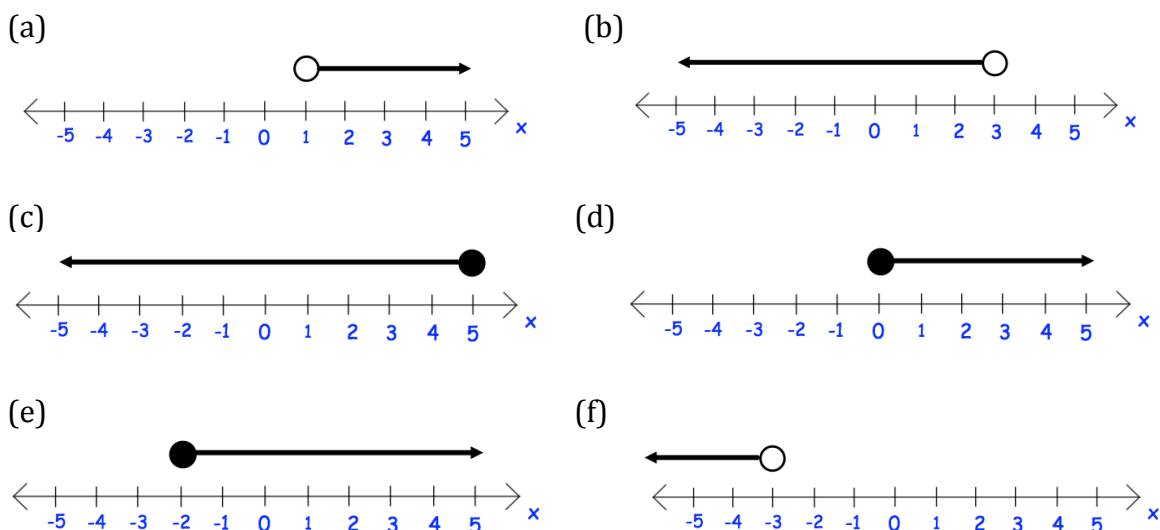
Question 2: Write down an inequality for each of the following

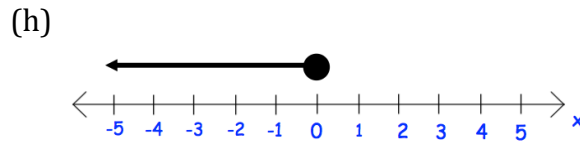
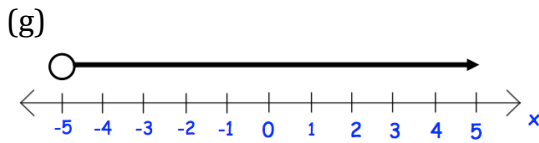
- (a) x is greater than 8 (b) x is less than 3
 (c) x is less than or equal to 1 (d) x is greater than or equal to 0
 (e) x is less than 7 (f) x is greater than or equal to -2
 (g) x is less than or equal to -10 (h) x is greater than 5

Question 3: Write down the meaning of these inequalities

- (a) $x > 6$ (b) $x < 2$ (c) $x \geq 1$ (d) $x \leq 4$
 (e) $x \geq 0$ (f) $x \leq -4$ (g) $x < -2$ (h) $x > 20$
 (i) $x < y$ (j) $a \geq b$ (k) $c > 5$ (l) $y \leq 100$

Question 4: Write down the inequalities shown below





Question 5: Show these inequalities on a number line.

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|-----------------|-----------------|----------------|----------------|
| (a) $x > 2$ | (b) $x < 4$ | (c) $x \geq 3$ | (d) $x \leq 5$ |
| (e) $x \geq 0$ | (f) $x \leq -1$ | (g) $x < -4$ | (h) $x > -5$ |
| (i) $x \geq -6$ | (f) $x > 0$ | (g) $x < -2$ | (h) $x > -1$ |

Question 6: Write down an inequality for each of the following

- x is greater than 2, but less than 5
- x is greater than 0, but less than 4
- x is greater than 1, but less than or equal to 7
- x is greater than -5 , but less than or equal to 2
- x is greater than or equal to -8 , but less than 3
- x is greater than or equal to 10, but less than 20
- x is greater than or equal to 3, but less than or equal to 6
- x is greater than or equal to 8, but less than or equal to 11

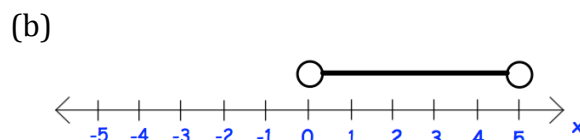
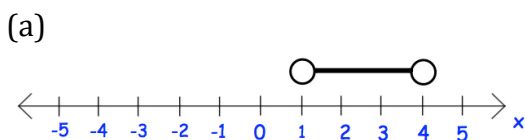
Question 7: Write down the meaning of these inequalities

- | | | | |
|--------------------|---------------------|-------------------------|------------------------|
| (a) $3 < x < 5$ | (b) $2 < x < 9$ | (c) $19 \leq x < 20$ | (d) $5 \leq x \leq 10$ |
| (e) $0 < x \leq 4$ | (f) $-4 \leq x < 1$ | (g) $-8 \leq x \leq -6$ | (h) $100 < x < 200$ |

Question 8: List all the integers (whole number) that satisfies each inequality

- | | | | |
|---------------------|---------------------|--------------------------|-------------------------|
| (a) $2 < x < 6$ | (b) $5 < x < 10$ | (c) $4 \leq x < 8$ | (d) $12 \leq x \leq 15$ |
| (e) $-2 < x \leq 3$ | (f) $-5 \leq x < 1$ | (g) $-10 \leq x \leq -5$ | (h) $-4 < x < 4$ |

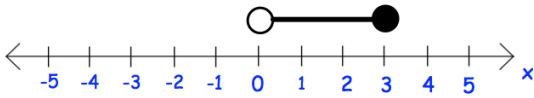
Question 9: Write down the inequalities shown below



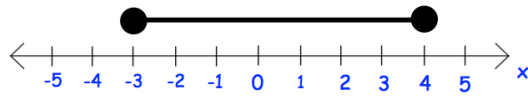
Inequalities

Videos 176, 177 on Corbettmaths

(c)



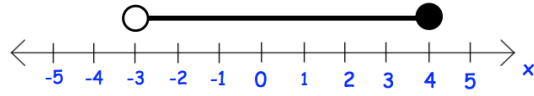
(d)



(e)



(f)



Apply

Question 1: The cost, c , of a TV is less than £300. Write this as an inequality.

Question 2: To go on a rollercoaster, a person's height, h , must be over 140cm. Write this as an inequality.

Question 3: The value of a house, v , is £100,000 or over. Write this as an inequality.



Question 4: There are 20 students in a class. The number of students present on a particular day is 20 or less. Write this as an inequality.

Question 5: Write down any integers (whole numbers) that satisfies **both** $x > 4$ and $x \leq 8$

Question 6: Write down any integers (whole numbers) that satisfies **both** $2 < x \leq 9$ and $x > 5$