# Question 1
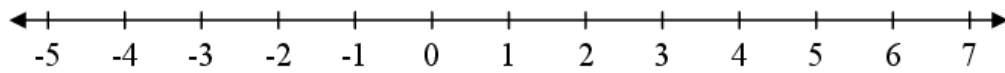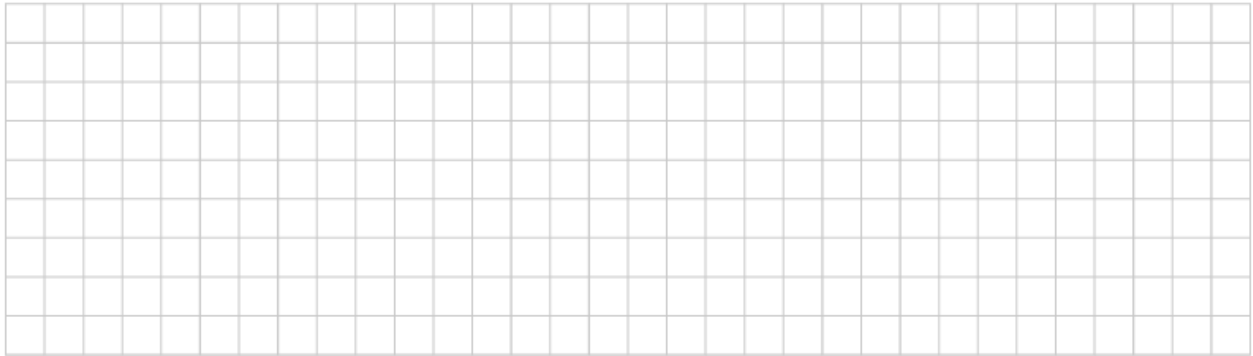
Solve the following inequality and show the solution on the number line.
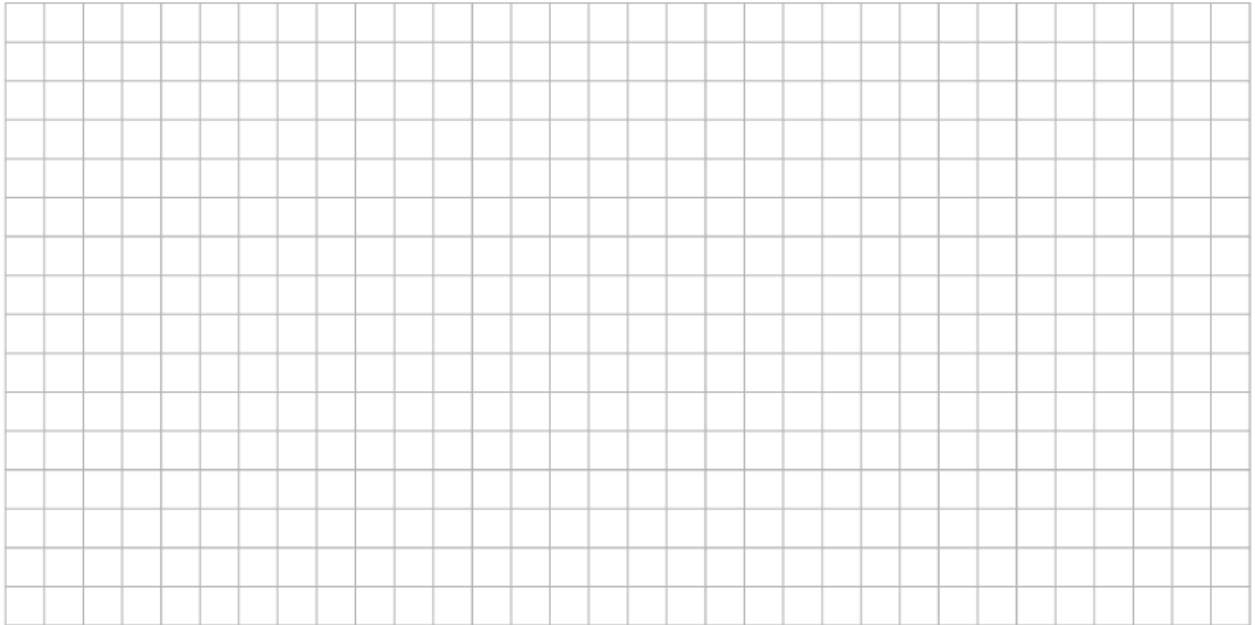
$$-17 \leq 1 - 3x < 13, \quad x \in \mathbb{Z}$$

# Question 2

**(a)** Solve the following inequality and show the solution on the number line.

$$-2 \leq \frac{1}{2}x - 3 < 1, \ x \in \mathbb{N}.$$

**(b)** Josephine hopes to go to college. She has saved €3000. She will attend college for 32 weeks in her first year. She plans to have at least €800 left at the end of the year.

**(i)** If she spends €$x$ each week, write an inequality to represent her spending during the year.

**(ii)** Hence, or otherwise, find the maximum amount Josephine can spend each week.