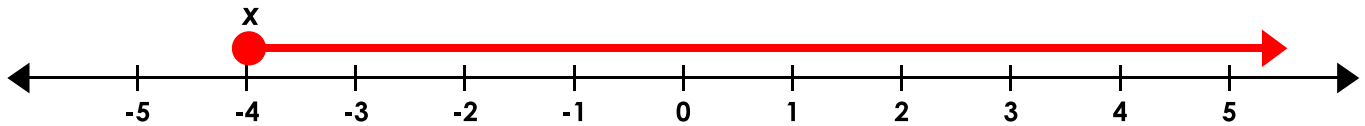


Inequalities

An inequality is a pair of expressions or numbers that are not equal.

When you solve an inequality, you need to show all of the values that make the statement true. One way to do this is by graphing the inequality on a number line. First, you must isolate the variable on one side of the inequality.

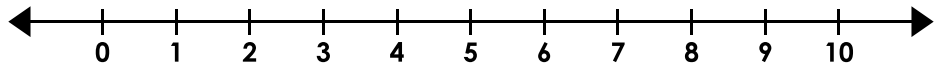
examples: $x + 7 \geq 3$ ($x + 7$ is greater than or equal to 3)
 $\frac{-7 \quad -7}{x \geq -4}$ (x is greater than or equal to negative 4)



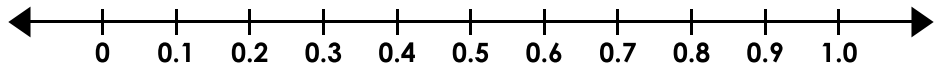
On an inequality graph, an **open circle** is used for *greater than* and *less than*. A **filled circle** is used for *greater than or equal to* and *less than or equal to*.

Graph each inequality on the number line.

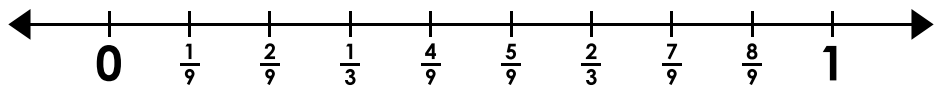
1. $i + 6 \leq 9$



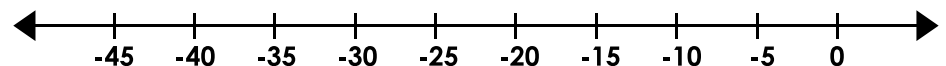
2. $3s \geq 1.8$



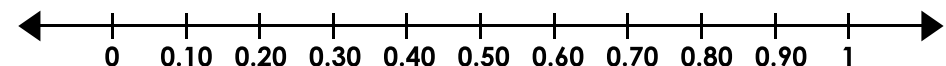
3. $\frac{3}{9} < f + \frac{2}{18}$



4. $-5 > t + 15$



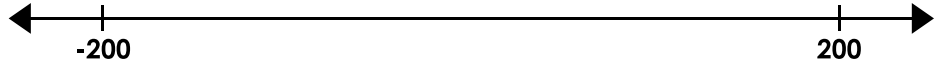
5. $4u \geq 40\%$



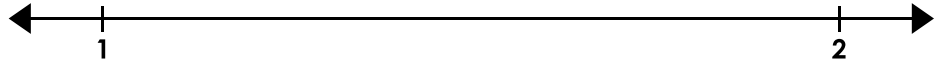
Inequalities

Graph each inequality on the number line.

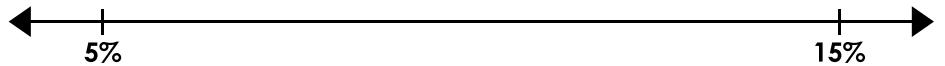
6. $2e \geq -200$



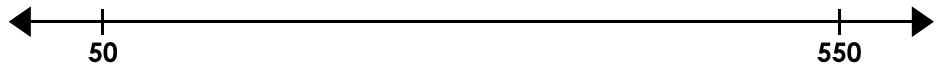
7. $1 < v - 0.3$



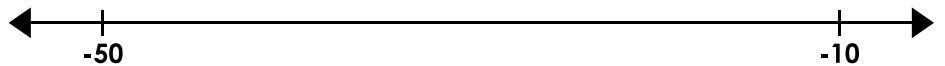
8. $\frac{1}{2}n \leq 6\%$



9. $r + 250 \geq 500$



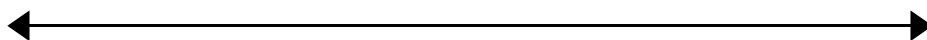
10. $\frac{p}{10} < -4$



11. For the inequality $c + 0.24 \geq 0.76$, Tamarah says 0.80 and 0.08 are both solutions. Is she correct? Explain why or why not.

12. The weather forecaster says the temperature tonight will be an additional 14° or more colder than the current temperature of 12° .

Write this as an inequality and graph it on the line below.

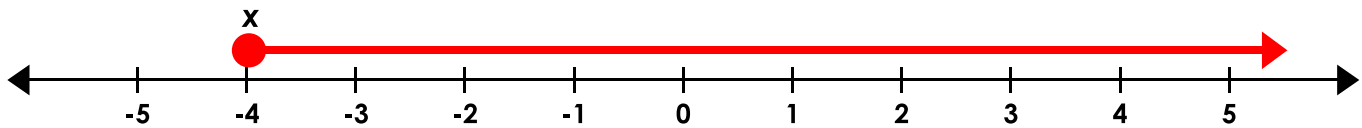


Inequalities

An inequality is a pair of expressions or numbers that are not equal.

When you solve an inequality, you need to show all of the values that make the statement true. One way to do this is by graphing the inequality on a number line. First, you must isolate the variable on one side of the inequality.

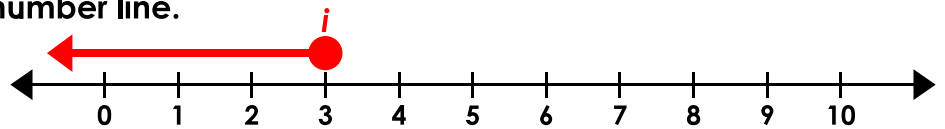
examples: $x + 7 \geq 3$ ($x + 7$ is greater than or equal to 3)
 $\frac{-7 \quad -7}{x \geq -4}$ (x is greater than or equal to negative 4)



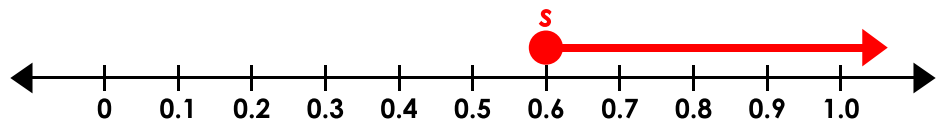
On an inequality graph, an **open circle** is used for *greater than* and *less than*. A **filled circle** is used for *greater than or equal to* and *less than or equal to*.

Graph each inequality on the number line.

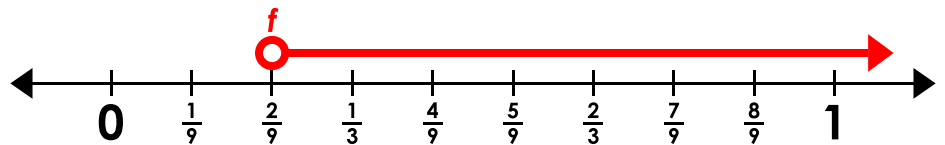
1. $i + 6 \leq 9$
 $\frac{-6 \quad -6}{i \leq 3}$



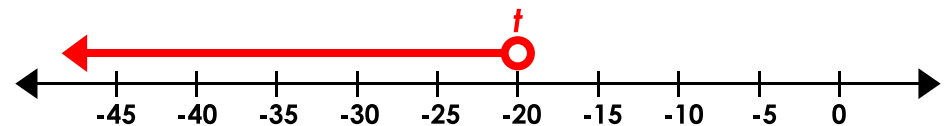
2. $\frac{3s}{3} \geq \frac{1.8}{3}$
 $s \geq 0.6$



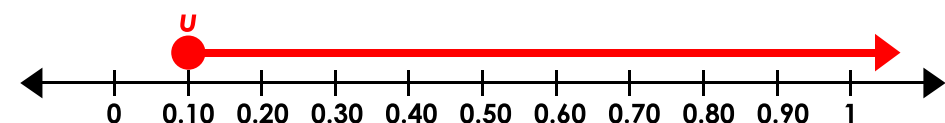
3. $\frac{3}{9} < f + \frac{2}{18}$
 $\frac{-\frac{1}{9} \quad -\frac{1}{9}}{\frac{2}{9} < f}$



4. $-5 > t + 15$
 $\frac{-15 \quad -15}{-20 > t}$



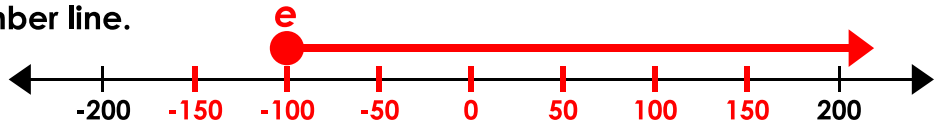
5. $\frac{4u}{4} \geq \frac{40\%}{4}$
 $u \geq 10\%$



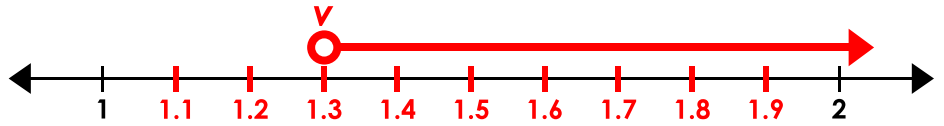
Inequalities

Graph each inequality on the number line.

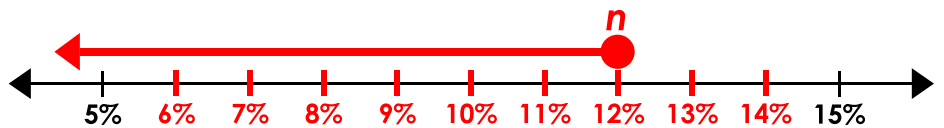
6. $2e \geq -200$
 $e \geq -100$



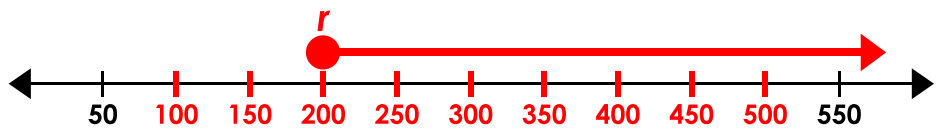
7. $1 < v - 0.3$
 $1.3 < v$



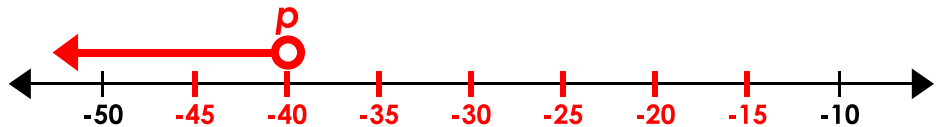
8. $\frac{1}{2}n \leq 6\%$
 $n \leq 12\%$



9. $r + 250 \geq 500$
 $r \geq 250$



10. $\frac{p}{10} < -4$
 $p < -40$



11. For the inequality $c + 0.24 \geq 0.76$, Tamarah says 0.80 and 0.08 are both solutions. Is she correct? Explain why or why not.

No, Tamarah is not correct. The inequality states that c is greater than or equal to 0.52;

0.80 is greater than 0.52, but 0.08 is less.

12. The weather forecaster says the temperature tonight will be an additional 14° or more colder than the current temperature of 12° . **Possible answers include: $w + 14^\circ \leq 12^\circ$ or $12^\circ \geq w + 14^\circ$**
 Write this as an inequality and graph it on the line below.

