Topic: Graphing inequalities on a number line

Question: Graph $x > 1$ on a number line.

Answer choices:

A

B

C

D

Solution: A

Since the solution consists of all the numbers greater than 1, and "greater than" in the inequality $x > 1$ means "to the right of" on a number line, the ray we draw must start at 1 and extend out to the right. Since the solution does not include 1, we draw an open circle at 1.

Then the graph of $x > 1$ on a number line is

Topic: Graphing inequalities on a number line

Question: Graph $x < -2$ on a number line.

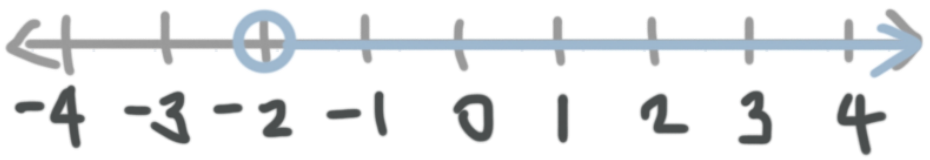
Answer choices:

A

B

C

D



Solution: C

Since the solution consists of all the numbers less than -2, and "less than" in the inequality $x < -2$ means "to the left of" on a number line, the ray we draw must start at -2 and extend out to the left. Since the solution does not include -2, we draw an open circle at -2.

Then the graph of $x < -2$ on a number line is

Topic: Graphing inequalities on a number line

Question: Graph $x \leq 5$ on a number line.

Answer choices:

A

B

C

D

Solution: A

Since the solution consists of all the numbers less than or equal to 5, and "less than" in the inequality $x \leq 5$ means "to the left of" on a number line, the ray we draw must start at 5 and extend out to the left. Since the solution includes 5, we draw a solid circle at 5.

Then the graph of $x \leq 5$ on a number line is