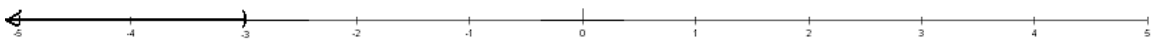
1. An irrational number is a number that cannot be expressed as a ratio of two numbers (a/b). Common irrational numbers are decimals that are non-terminating and do not repeat. Examples include π and $\sqrt{2}$.

   Let's investigate the answer choices:

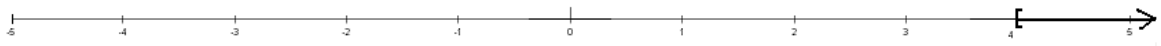
   A) $\sqrt{36} = \sqrt{6^2} = 6$ and 6 can be expressed as the ratio of two numbers 6/1 (rational)
   B) $\sqrt{14} = 3.74165...$ is a decimal that is non-terminating and non-repeating (irrational)
   C) $\frac{2}{\sqrt{9}} = \frac{2}{3} = 0.66666...$ is a decimal that is non-terminating but repeats (rational)
   D) $\sqrt[3]{-8}$ the third root of -8 = -2 $\sqrt[3]{(-2)^3} = -2$ (rational)

   $\sqrt{14}$ is the only one that cannot be expressed as a ratio of two numbers. Answer is B.

2. This problem deals with inequalities.
   $x < -3$
   Reads "x is less than -3"
   Is graphed as follows



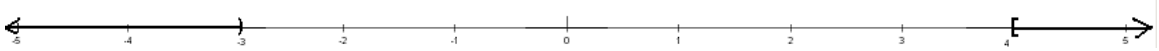
   $x \geq 4$
   Reads "x is greater than or equal to 4"
   Is graphed as follows



   The) symbol is to show exclusion. When you use the symbol) or (it means that the solution does not contain that number. Use this symbol when you use > or <.

   The [symbol is used to show inclusion. When you use the symbol] or [the solution includes that number. Use this symbol when you use $\leq$ or $\geq$.

   The final solution will combine both graphs.



   Answer is A