Name_____Date_____

1 What transformations occurred to the graph of $f(x) = |x|$ when changed to $g(x) = -2|x - 5| + 4$?

    A Reflection over the x-axis.
       Shift left 5 units.
       Shift up 4 units.
       Vertical stretch by a factor of 2.

    B Reflection over the y-axis.
       Shift right 5 units.
       Shift up 4 units.
       Vertical stretch by a factor of 2.

    C Reflection over the x-axis.
       Shift right 5 units.
       Shift up 4 units.
       Vertical stretch by a factor of 2.

    D Reflection over the x-axis.
       Shift right 5 units.
       Shift up 4 units.
       Horizontal stretch by a factor of 2.

2 What is the solution to the equation $|2x - 5| = 10$?

    A $x = -7.5, 7.5$

    B $x = -2.5, 7.5$

    C $x = 7.5$

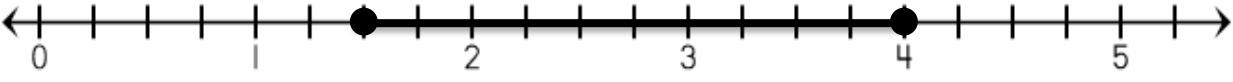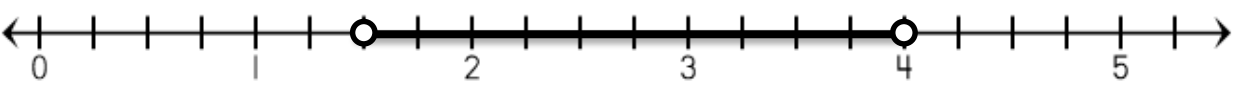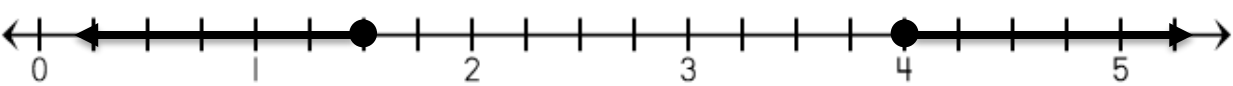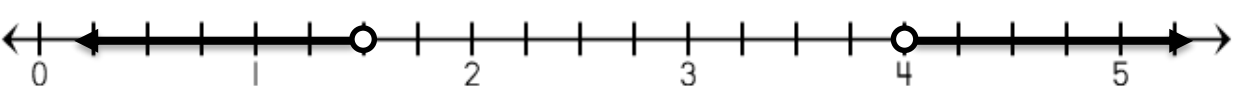   **D** $x = -2.5$

3 The proper brewing temperature for a cup of tea is within 5°F of 210°F. Write an equation that could be used to determine the maximum and minimum temperatures for the cup of tea.

    A $|x - 210| = 5$

    B $|5x| = 210$

    C $|5x - 210| = 0$
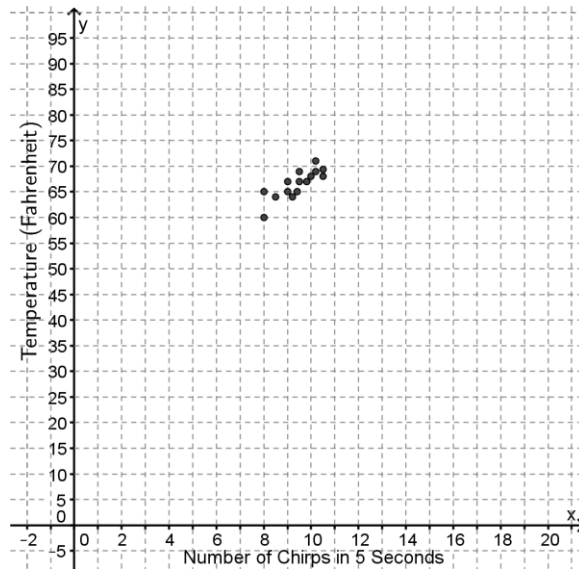
    D $|x - 5| = 210$

4 Which of the following number lines best represents the solution to the following inequality?

$$|4x - 11| < 5$$

A

B

C

D

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5 The scatteplot below represents the air temperature in degrees Fahrenheit for a certain number of cricket chirps every 5 seconds.

Based on this data, if there are 16 chirps in 5 seconds, what is the air temperature?

A 80°F

B 85°F

C 90°F

D 95°F