Progress Check – Piecewise Functions & Absolute Value Graphing (A8-A11)   Name _____

1) Match the piecewise functions to their graphs:

Function A = Graph _____   Function B = Graph _____   Function C = Graph _____

A
$$f(x) = \begin{cases} -\frac{7}{3}x - \frac{8}{3}, & -5 \le x \le 1 \\ -\frac{2}{3}x - \frac{13}{3}, & 1 \le x \le 4 \\ \frac{5}{2}x - 17, & 4 \le x \le 6 \end{cases}$$
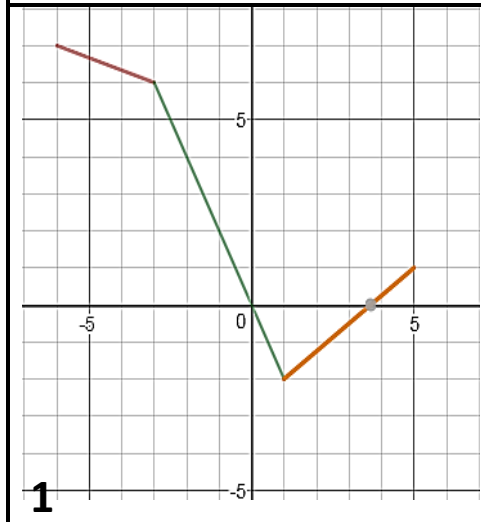
B
$$f(x) = \begin{cases} 2x, & -3 \le x \le -1 \\ -2, & -1 \le x \le 2 \\ -\frac{1}{2}x - 1, & 2 \le x \le 6 \end{cases}$$
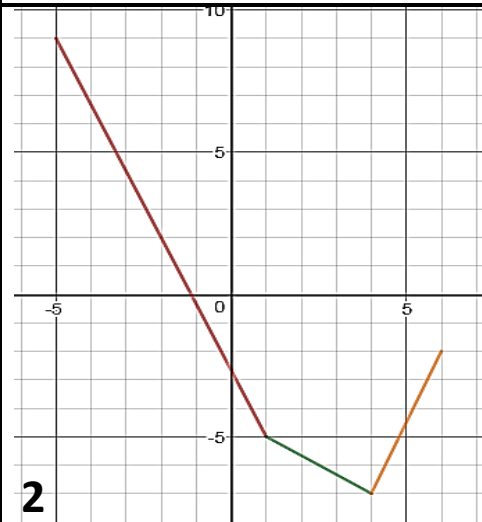
C
$$f(x) = \begin{cases} -\frac{1}{3}x + 5, & -6 \le x \le -3 \\ -2x, & -3 \le x \le 1 \\ \frac{3}{4}x - \frac{11}{4}, & 1 \le x \le 5 \end{cases}$$
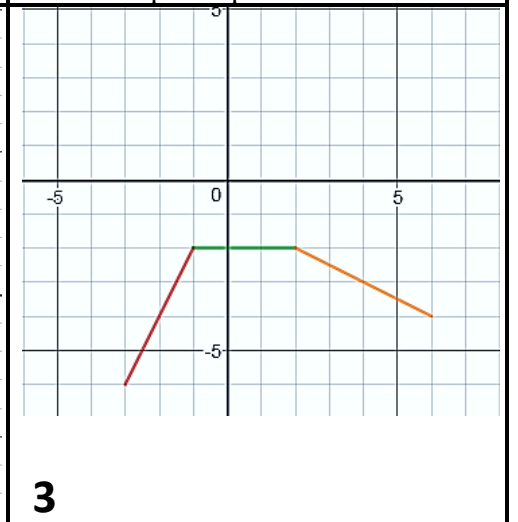

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Progress Check – Piecewise Functions & Absolute Value Graphing (A8-A11)   Name _____

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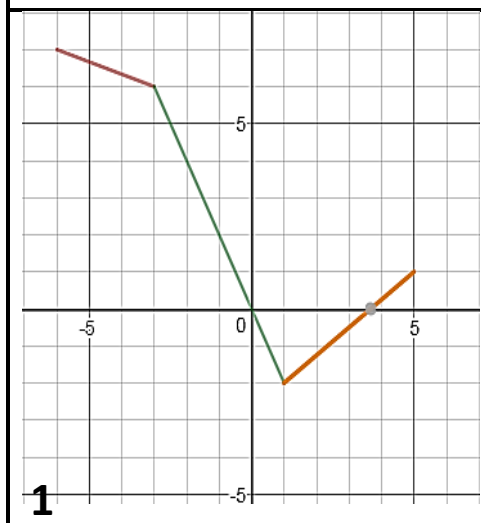
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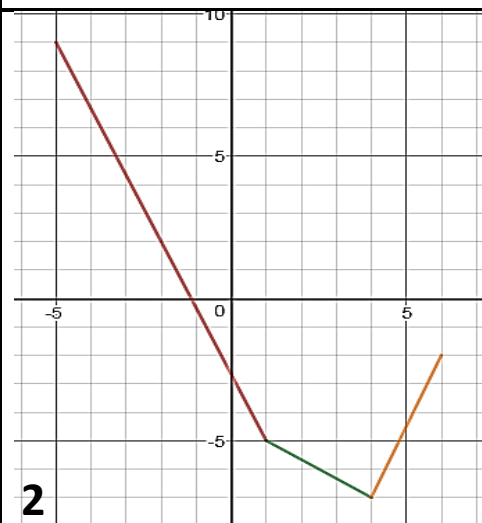
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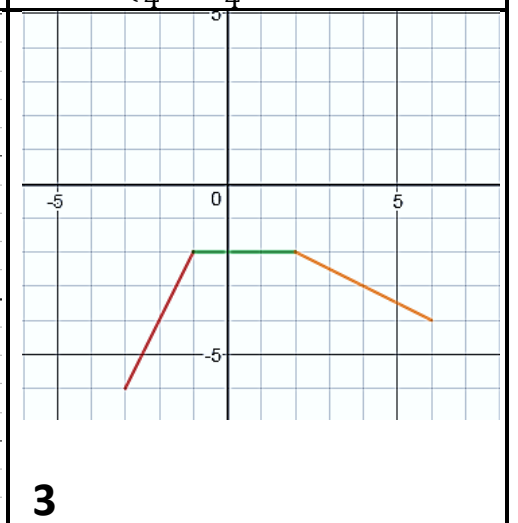

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2) Fred's Fabulous Fitness Center charges $29.99 for the first ten weeks of membership. After the first ten weeks, the center charges $10.00 for every additional week. Write a piecewise function for this situation where w is the number of weeks and $c(w)$ is the amount charged.

$$c(w) = \begin{cases} \underline{\hspace{3cm}} & , \ \underline{\hspace{3cm}} \\ \underline{\hspace{3cm}} & , \ \underline{\hspace{3cm}} \end{cases}$$

3) Solve the following absolute value equation by graphing: $|x - 6| < 3$

Write your solution as a compound inequality **AND** graph on a number line.