Instructions: Show all work. Use exact answers unless otherwise asked to round.

1. Write the function $f(x) = |x|$ after it has undergone the following transformations:
   a. Horizontal shift to the right of 2
   b. Vertical reflection
   c. Vertical stretch by 3
   d. Vertical shift down by 5

2. Find an equation of the line with the following properties: Passing through the points $(-2, -5)$ and $(6, -5)$. Write the solution in:
   a. Standard form

   b. Slope-intercept form

   c. As a function

3. Solve the equation $3|x - 1| = 2|x + 1|$.

4. For the quadratic function $f(x) = 2x^2 - 4x - 1$, rewrite the equation in standard (vertex) form.

5. Jeff and Toby take a trip and log their mileage and gallons of gas used. Find the line of best fit for the data. Write the equation of the best-fit line. What does the slope of the line mean in context?

Gasoline Used (Gallons)	0	9.26	19.03	28.25	36.45	44.64	53.57	62.62	71.93	81.69	90.43
Odometer (Miles)	41	356	731	1051	1347	1631	1966	2310	2670	3030	3371