1. Given a function \( f(x) \) describe ALL the transformations in \(-f(5x) + 3\).
   - Horizontal shrink by \( \frac{1}{5} \)
   - Reflection over x-axis
   - V. Shift up 3

2. Given a function \( f(x) \) describe ALL the transformations in \( 2f(-x) - 7 \).
   - Reflection over y-axis
   - V. Stretch by 2
   - V. Shift Down 7

3. Given a function, \( f(x) \), write a formula for the following transformations:
   - Horizontal Shrink of \( \frac{1}{2} \), Reflection over x axis, Vertical Shift up 6
   \[ -f(2x) + 6 \]

4. Given a function, \( f(x) \), write a formula for the following transformations:
   - Vertical Stretch of 4, Reflection over y axis, Vertical Shift down 2
   \[ 4f(-x) - 2 \]

5. Given the parent function, \( f(x) = |x| \), create a function that would have a Range of \([4, \infty)\)
   \[ g(x) = |x| + 4 \]

6. Given the parent function, \( f(x) = |x| \), create a function that would have a Range of \((-\infty, 8]\)
   \[ g(x) = -|x| + 8 \]

7. Given the following graph preform the following transformations and write a function that shows the transformations described.
   - Horizontal stretch of 2
   - Reflection over x axis
   - Vertical Shift down 2
   (a) Function:
   \[ -f\left(\frac{1}{2}x\right) - 2 \]
   (b) Graph with the given transformations
8. What is the domain of all absolute value functions? \( (-\infty, \infty) \)

9. What is the parent function for all absolute value functions? \( y = |x| \)

10. Given \( f(x) = -|x + 2| + 5 \)

   (a) Describe all the transformations
   - H. shift left 2
   - Reflection over x-axis
   - V. shift up 5

   (b) Graph \( f(x) \) (show at least 5 points)

<table>
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   (c) What is the Range of \( f(x) \)?
   \( (-\infty, 5] \)

11. Given \( f(x) = 3|x - 4| - 6 \)

   (a) Describe all the transformations
   - H. shift right 4
   - V. stretch by 3
   - V. shift down 6

   (b) Graph \( f(x) \) (show at least 5 points)

<table>
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   (c) What is the Range of \( f(x) \)?
   \( [-6, \infty) \)