2. [8 points] Below is a portion of a graph of an even function \( w(x) \). Note that \( w(x) \) has a vertical asymptote at \( x = -1 \), has a horizontal asymptote at \( y = -2.5 \), and is linear on \([-5, -4]\).

Evaluate each of the given quantities. If the value does not represent a real number (including the case of limits that diverge to \( \infty \) and \(-\infty\)), write DNE. You do not need to show work in this problem. Give your answers in exact form.

a. [1 point] \( \lim_{p \to -4^+} w(p) \)

Answer: _______

b. [1 point] \( \lim_{x \to -8} w(x) \)

Answer: _______

c. [2 points] \( \lim_{h \to -1} w(-2 + h) \)

Answer: _______

d. [2 points] \( \lim_{x \to \infty} w(x) \)

Answer: _______

e. [2 points] \( \lim_{h \to 0} \left( (3 - h)^2 + \frac{w(-4.5 + h) - w(-4.5)}{h} \right) \)

Answer: _______