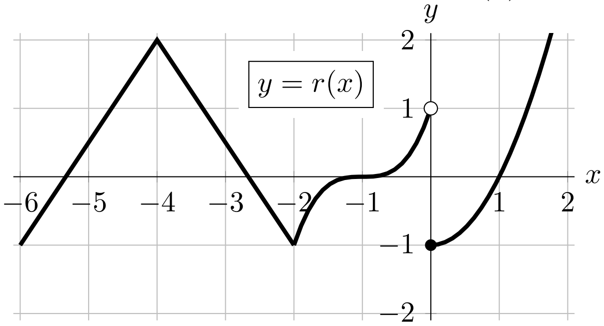
1. [9 points] A portion of a graph of the function $r(x)$, whose domain is $(-\infty, \infty)$ is shown below to the left. The function $r(x)$ is linear on the intervals $[-6, -4]$ and $[-4, -2]$. A table of values for a differentiable and invertible function $q(x)$ and its derivative $q'(x)$ are shown below to the right.



x	-3	-2	-1	0	1	2	3
$q(x)$	14	10	3	2	-5	-6	-15
$q'(x)$	-10	-12	-4	0	-2	-5	-6

Find the **exact** values of the quantities in parts **a.-d.**, whenever possible. Write NEI if there is not enough information to do so, or write DNE if the value does not exist. Your answers should not include the letters q or r but you do not need to simplify your numerical answers. Show your work.

a. [1 point] Find $r'(-4)$.

Answer: $r'(-4) =$ ______________

b. [2 points] Find $(q^{-1})'(-6)$.

Answer: $(q^{-1})'(-6) =$ ______________

c. [3 points] Let $J(x) = e^{q(x)}$. Find $J'(1)$.

Answer: $J'(1) =$ ______________

d. [3 points] Let $D(x) = r(x)q(2x + 4)$. Find $D'(-3)$.

Answer: $D'(-3) =$ ______________