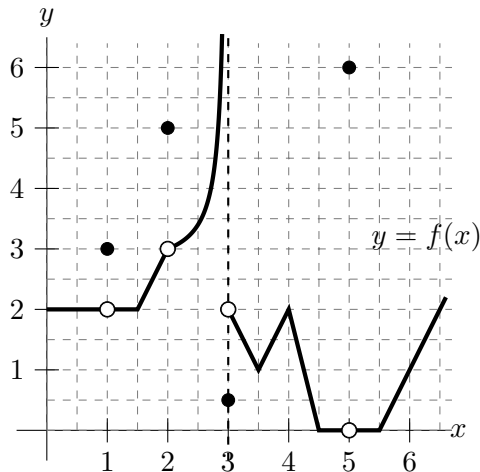


1. [10 points] A portion of the graph of a function  $f$  is shown below.



Note: You may assume that pieces of the function that appear linear are indeed linear.

Use the graph above to evaluate each of the expressions below, and write your answer on the answer blank provided. If any of the quantities do not exist (including the case of limits that diverge to  $\infty$  or  $-\infty$ ), write DNE.

a. [1 point]  $f(1)$

Answer: 3

b. [1 point]  $\lim_{x \rightarrow 5} f(x)$

Answer: 0

c. [1 point]  $\lim_{q \rightarrow 3} f(q)$

Answer: DNE

d. [1 point]  $\lim_{z \rightarrow 2} f(2)$

Answer: 5

e. [1 point]  $\lim_{r \rightarrow 6^-} f(r)$

Answer: 1

f. [1 point]  $\lim_{h \rightarrow 0} \frac{f(4.25 + h) - f(4.25)}{h}$

Answer: -4

g. [1 point]  $\lim_{p \rightarrow 0.5} \frac{f(p)}{p}$

Answer: 4

h. [1 point]  $\lim_{t \rightarrow 3} f(t)f(t+2)$

Answer: 0

i. [1 point]  $\lim_{x \rightarrow 3^+} f(f(x))$

Answer: 3

j. [1 point]  $\lim_{s \rightarrow 1} f(f(s))$

Answer: 5