Use the table to find the given limits.

1.

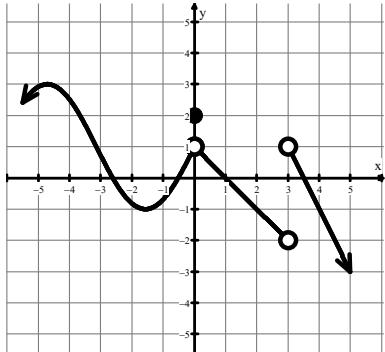| $\lim_{x \to 2} f(x) = 4$	$\lim_{x \to -2} f(x) = -3$	$\lim_{x \to 2} g(x) = 1$	$\lim_{x \to -2} g(x) = 6$

a. $\lim_{x \to 2} \left(f(x) + \frac{g(-x)}{2} \right)$

b. $\lim_{x \to 2} \left(f(-x) g(x) \right)$

Use the graph to find the given limits.

2.

Graph of f

a. $\lim_{x \to -3} f(f(x)) =$

b. $\lim_{x \to 0} f(f(x)) =$

Use the table to find the given limits.

3.

$f(3) = -2$	$\lim_{x \to 3} f(x) = 1$
$g(3) = -4$	$\lim_{x \to 3} g(x) = 2$
$h(3) = -6$	$\lim_{x \to 3} h(x) = 3$

a. $\lim_{x \to 3} \left(\frac{h(x)}{f(x) + 2g(x)} \right) + h(3)$

b. $g(3) + \lim_{x \to 3} \left(h(x) f(x) \right)$

Use the piecewise functions to find the given values.

4. $g(x) = \begin{cases} \frac{5}{x} - \frac{x}{2}, & x < -5 \\ x^2 - \frac{6}{x}, & -5 \le x < 2 \\ \sqrt{3 - x}, & x \ge 2 \end{cases}$

a. $\lim_{x \to -5^-} g(x)$

b. $\lim_{x \to -5^+} g(x)$

c. $\lim_{x \to -5} g(x)$

d. $\lim_{x \to 2} g(x)$

5. $h(\theta) = \begin{cases} \cos 2\theta, & \theta < \frac{\pi}{2} \\ \frac{\tan \theta}{2}, & \frac{\pi}{2} < \theta \le \pi \\ \sin \frac{\theta}{2}, & \theta \ge \pi \end{cases}$

a. $\lim_{\theta \to \pi^+} h(\theta)$

b. $\lim_{\theta \to \frac{\pi}{2}^-} h(x)$

c. $\lim_{\theta \to \frac{\pi}{2}} h(\theta)$

d. $\lim_{\theta \to \pi} h(x)$