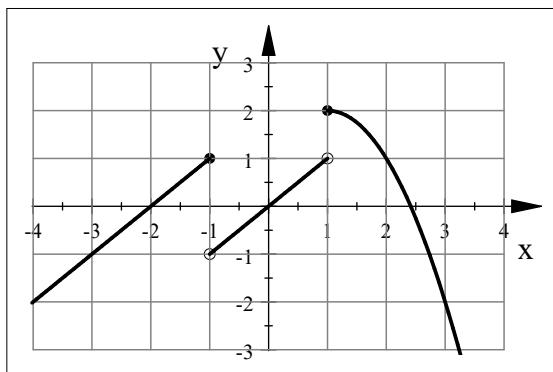


Choose the correct answer in each of the following:

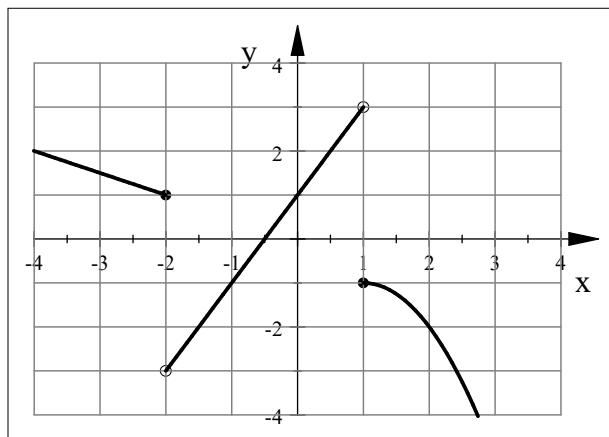
Section 2.2+2.3:

1. If $f(x)$ is a function whose graph is shown, then $\lim_{x \rightarrow 2} f(x) =$



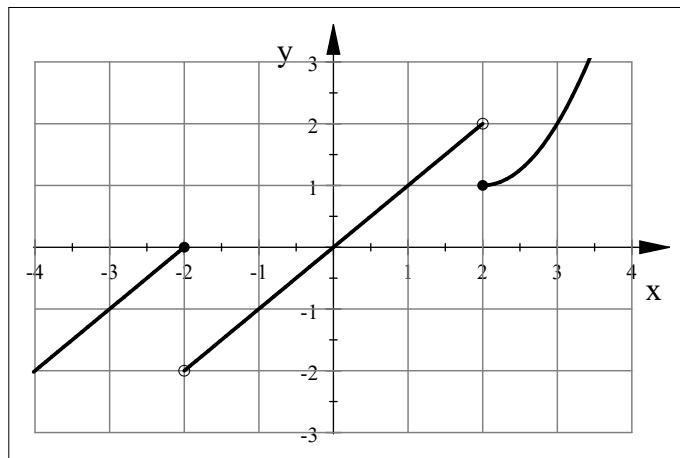
- (a) 2
 - (b) 1
 - (c) -1
 - (d) Does not exist
-

2. For the function $j(x)$ whose graph is shown, $\lim_{x \rightarrow 1^-} j(x) =$



- (a) 0
 - (b) 1
 - (c) -1
 - (d) 3
-

3. If $f(x)$ is a function whose graph is shown, then $\lim_{x \rightarrow -2} f(x) =$



- (a) Does not exist
 - (b) -2
 - (c) -1
 - (d) 0
-

4. If $f(x) = \begin{cases} x-2 & \text{if } x \geq -3 \\ 2x+2 & \text{if } x < -3 \end{cases}$, then $\lim_{x \rightarrow -3^-} f(x) =$

- (a) -4
 - (b) 5
 - (c) -6
 - (d) -5
-

5. $\lim_{x \rightarrow -6^+} \frac{|x+6|}{x+6} =$

- (a) -1
 - (b) Does not exist
 - (c) 0
 - (d) 1
-

6. $\lim_{x \rightarrow \frac{3\pi}{2}} \left(\frac{10}{\sin x + 3} - 1 \right) =$

- (a) 4
 - (b) 5
 - (c) 2
 - (d) -1
-

7. $\lim_{x \rightarrow 0} \frac{4 \cos x \sin x}{\sin 2x} =$

- (a) 4
 - (b) 2
 - (c) 0
 - (d) 1
-

8. $\lim_{x \rightarrow \infty} \frac{\sqrt{7x^2 + 4x} + 4}{9x - 5} =$

- (a) ∞
 - (b) $\frac{\sqrt{7}}{9}$
 - (c) $\frac{-\sqrt{7}}{9}$
 - (d) 0
-

9. The vertical asymptote(s) of the function $f(x) = \frac{3x - 2}{(x - 4)^2}$ is(are)

- (a) $x = -4, x = 4$
 - (b) $y = -4$
 - (c) $x = 4$
 - (d) $y = -4, y = 4$
-

10. $\lim_{x \rightarrow \frac{5\pi}{2}^-} \tan x =$

- (a) 0
 - (b) $-\infty$
 - (c) ∞
 - (d) 1
-

11. If $\lim_{x \rightarrow 1} \frac{f(x) - 5}{x} = 3$ then $\lim_{x \rightarrow 1} f(x) =$

- (a) 8
 - (b) 0
 - (c) -2
 - (d) Does Not Exists
-

12. If $x^2 + 1 \leq f(x) \leq \frac{\sin x}{x}$ then $\lim_{x \rightarrow 0} f(x) =$

- (a) 0
 - (b) Does Not Exists
 - (c) 1
 - (d) ∞
-

answers: 1-b, 2-d, 3-a, 4-a, 5-d, 6-a, 7-b, 8-b, 9-c, 10-c, 11-a, 12-c.