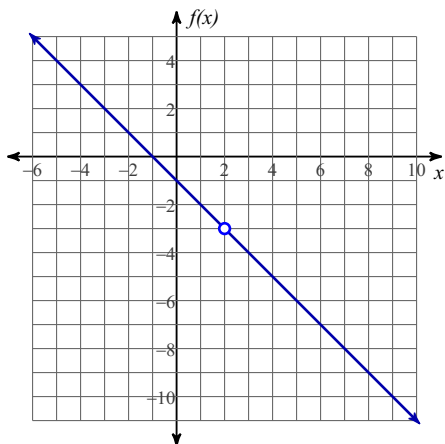


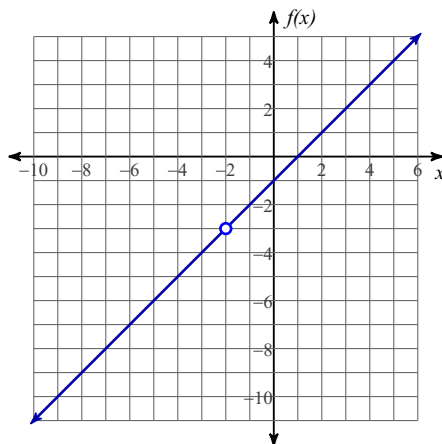
Worksheet 3 - Limits II

Evaluate each limit.

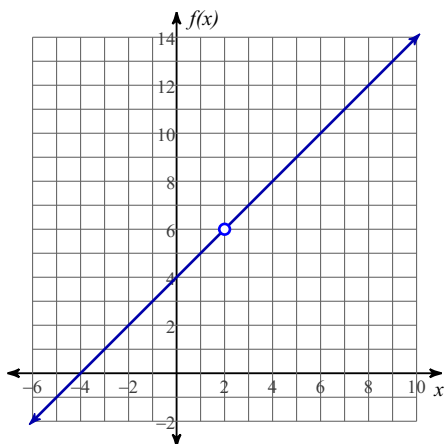
1) $\lim_{x \rightarrow 2} -\frac{x^2 - x - 2}{x - 2}$



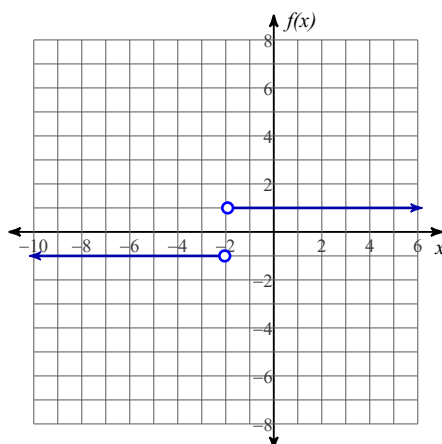
2) $\lim_{x \rightarrow -2} \frac{x^2 + x - 2}{x + 2}$



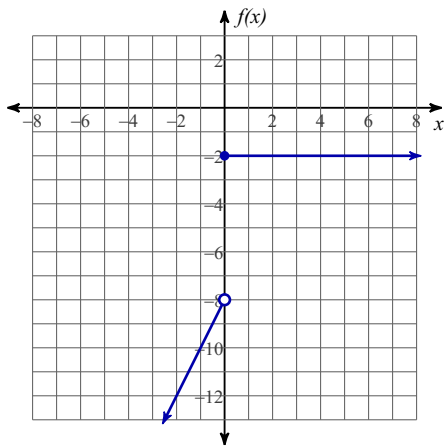
3) $\lim_{x \rightarrow 2} \frac{x^2 + 2x - 8}{x - 2}$



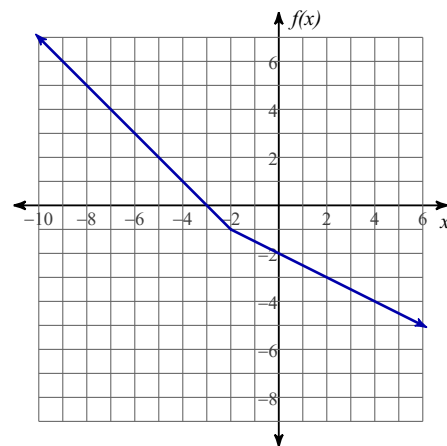
4) $\lim_{x \rightarrow -2^+} \frac{x + 2}{|x + 2|}$



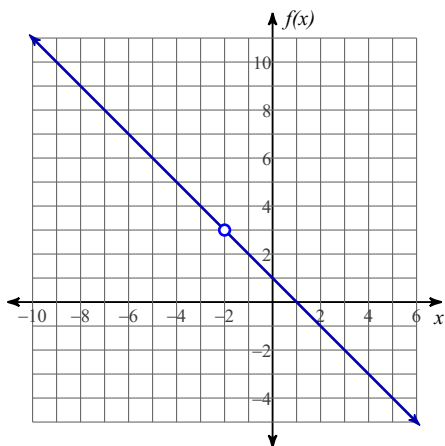
$$5) \lim_{x \rightarrow 0^+} f(x), f(x) = \begin{cases} 2x - 8, & x < 0 \\ -2, & x \geq 0 \end{cases}$$



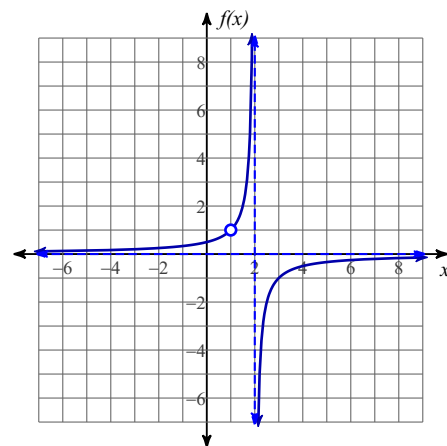
$$6) \lim_{x \rightarrow -2^+} f(x), f(x) = \begin{cases} -x - 3, & x \leq -2 \\ -\frac{x}{2} - 2, & x > -2 \end{cases}$$



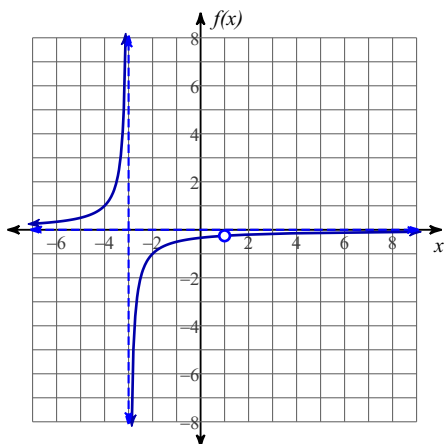
$$7) \lim_{x \rightarrow -2} -\frac{x^2 + x - 2}{x + 2}$$



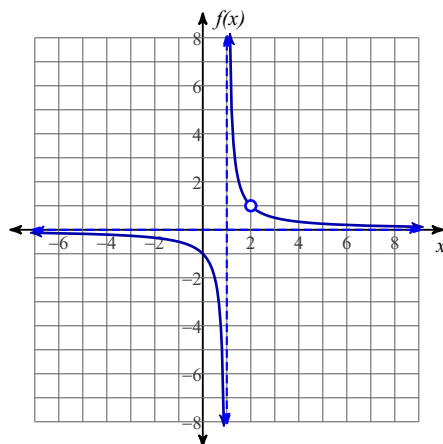
$$8) \lim_{x \rightarrow 1} -\frac{x - 1}{x^2 - 3x + 2}$$



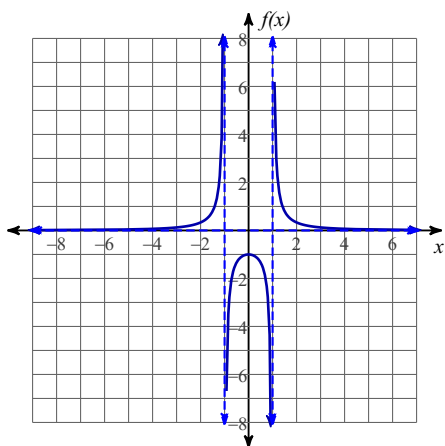
$$9) \lim_{x \rightarrow 1} -\frac{x-1}{x^2+2x-3}$$



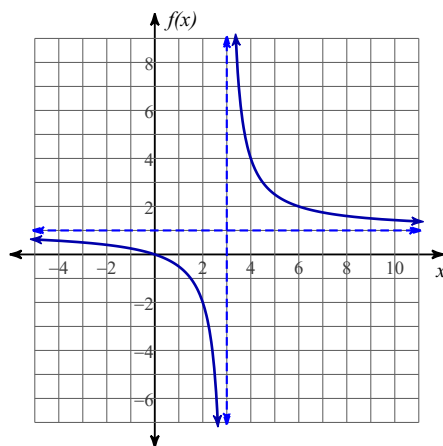
$$10) \lim_{x \rightarrow 1} \frac{x-2}{x^2-3x+2}$$



$$11) \lim_{x \rightarrow -1} \frac{1}{x^2-1}$$



$$12) \lim_{x \rightarrow 3} \frac{x}{x-3}$$



$$13) \lim_{x \rightarrow \infty} -\frac{4}{x^2+4}$$

$$14) \lim_{x \rightarrow \infty} \frac{x^2}{2x+4}$$

$$15) \lim_{x \rightarrow \infty} (x^4 - x^2 - x - 1)$$

$$16) \lim_{x \rightarrow -\infty} \frac{16x}{x^2+16}$$

$$17) \lim_{x \rightarrow -\infty} -\frac{x^2}{x^2 - 9}$$

$$18) \lim_{x \rightarrow \infty} -\frac{3x^3}{4x^2 - 1}$$

$$19) \lim_{x \rightarrow -\infty} (-x^5 + 3x^3 - x + 3)$$

$$20) \lim_{x \rightarrow -3} (-x + 2)$$

$$21) \lim_{x \rightarrow -2} x$$

$$22) \lim_{x \rightarrow -1} (-2x - 1)$$

$$23) \lim_{x \rightarrow 3} -\frac{x^2 - 2x - 3}{x - 3}$$

$$24) \lim_{x \rightarrow 2} \frac{x - 2}{x^2 - 5x + 6}$$

$$25) \lim_{x \rightarrow 1} -\frac{x^2 + 3x - 4}{x - 1}$$

$$26) \lim_{x \rightarrow -2} -\frac{x + 2}{x^2 + x - 2}$$