

۱۸۱ « تکلیف ۲۹ » یا زدهم دفتر B

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الف) $\lim_{x \rightarrow c^+} (f(x) - \mu) = a$ مربوط

ب) $\lim_{x \rightarrow c^-} (f(x) - \mu) = a$ مربوط

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②

الف) $\lim_{x \rightarrow c^+} (f(x) - \mu) = f(c^+) - \mu = f(c) - \mu = a$ ✓

ب) $\lim_{x \rightarrow c^-} (f(x) - \mu) = f(c^-) - \mu = f(c) - \mu = a$

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③

الف) $\lim_{x \rightarrow c^+} (f(x) - \mu) = a$

ب) $\lim_{x \rightarrow c^-} (f(x) - \mu) = f$

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④

الف) $\left[\lim_{x \rightarrow c^+} (f(x) - \mu) \right] = a$

ب) $\left[\lim_{x \rightarrow c^-} (f(x) - \mu) \right] = a$

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⑤

$\lim_{x \rightarrow \mu} \frac{f(x) - \mu}{x - \mu} = \begin{cases} \frac{0}{0^+} = +\infty \\ \frac{0}{0^-} = -\infty \end{cases}$ مربوط

$\lim_{x \rightarrow \mu} \frac{f(x) - \mu}{(x - \mu)^2} = \begin{cases} \frac{0}{(0^+)^2} = +\infty \\ \frac{0}{(0^-)^2} = +\infty \end{cases}$ مربوط

⑥

$\lim_{x \rightarrow \mu} \frac{f(x) - \mu}{\sqrt{x - \mu}} = \begin{cases} \frac{0}{0^+} = +\infty \\ \frac{0}{0^-} = -\infty \end{cases}$ تقریب نشده

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ب) $\lim_{x \rightarrow \mu} \frac{f(x) - \mu}{\sqrt{x^2 - 4x + 4}} = \begin{cases} \frac{0}{0^+} = +\infty \\ \frac{0}{0^-} = -\infty \end{cases}$ تقریب نشده

9) $\lim_{x \rightarrow 2} \frac{x^2 - 4}{x^2 - 4x + 4}$ $\left(\begin{array}{l} x \rightarrow 2^+ \rightarrow \frac{0}{0} \rightarrow -\infty \\ x \rightarrow 2^- \rightarrow \frac{0}{0} \rightarrow +\infty \end{array} \right)$ 5

$\hookrightarrow (x-2)(x+2) / (x-2)^2$

$\rightarrow \lim_{x \rightarrow 2} \frac{x^2 - 4}{(x-2)^2} \left(\begin{array}{l} x \rightarrow 2^+ \rightarrow \frac{0}{0} \rightarrow \infty \\ x \rightarrow 2^- \rightarrow \frac{0}{0} \rightarrow -\infty \end{array} \right)$

10) ا) $\lim_{x \rightarrow 2} [3x] + [-2x]$ $\left(\begin{array}{l} x \rightarrow 2^+ \rightarrow 9 + (-4) = 5 \\ x \rightarrow 2^- \rightarrow [-2x] - 4 = -8 \end{array} \right)$ 5

$\rightarrow \lim_{x \rightarrow 2} [-2x] + [3x]$

$\left(\begin{array}{l} x \rightarrow 2^+ \rightarrow 2x + -1x = 1 \\ x \rightarrow 2^- \rightarrow 2x + -1x = 1 \end{array} \right)$ 2x - 1x = 1

9) ا) $\lim_{x \rightarrow 2} [x^2 - 4x]$ $\left(\begin{array}{l} x \rightarrow 2^+ \rightarrow -4 \\ x \rightarrow 2^- \rightarrow -4 \end{array} \right)$

$\rightarrow \lim_{x \rightarrow 2} [5x - 2x^2]$ $\left(\begin{array}{l} x \rightarrow 2^+ \rightarrow 1 \\ x \rightarrow 2^- \rightarrow 1 \end{array} \right)$

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

$\left(\begin{array}{l} x \rightarrow 2^+ \rightarrow \frac{1}{2} \\ x \rightarrow 2^- \rightarrow \frac{1}{2} \end{array} \right)$ 5

10) ا) $\lim_{x \rightarrow 2} \frac{x-2}{(x-2)(x-1)} = \frac{1}{2-1} = 1$

$\lim_{x \rightarrow 2} \frac{-(x-2)}{(x-2)(x-1)} = \frac{-1}{2-1} = -1$ 5

$\lim_{x \rightarrow 2} \frac{(x-1)}{(x+1)(x-1)} = \frac{1}{5}$

$\lim_{x \rightarrow 2} \frac{x}{(x-1)(x+1)} = \frac{2}{(2-1)(2+1)} = \frac{2}{3}$