



$$No01 = \left[ \begin{array}{ccc} .1 = \lim_{x \rightarrow 2} 5x^2 & .2 = \lim_{x \rightarrow 1} (2x^3 - 4x^2 + 2x)(5x - 2) & .3 = \lim_{x \rightarrow 4} \frac{4x^2 - 2x - 3}{3x^2 - 3} \\ .4 = \lim_{x \rightarrow 36} \frac{x - 36}{\sqrt{x} - 6} & .5 = \lim_{x \rightarrow 27} \frac{x - 27}{\sqrt{x} - 2 - 5} & .6 = \lim_{x \rightarrow 1} \sqrt{x - 2} \\ .7 = \lim_{x \rightarrow (-3)} |x + 2| & .8 = \lim_{x \rightarrow 2} \frac{x - 2}{|x - 2|} & .9 = \lim_{x \rightarrow 2+} \frac{x - 2}{|x^2 - 3x + 2|} \\ .10 = \lim_{x \rightarrow 0+} \frac{1}{x} + \frac{1}{|x|} & .11 = \lim_{x \rightarrow (4/5)} \frac{|5x - 4|}{20x^2 - 31x + 12} & \end{array} \right],$$

$$No02 = \left[ \left[ \left[ f(x) = \begin{cases} \frac{|x|}{x} & x \neq 0 \\ 1 & x = 0 \end{cases}, g(x) = 4x - 2 \right] \right. \right. \\ \left. \left. \begin{array}{lll} .3.1 = \lim_{x \rightarrow 0^+} f(x) + g(x) & .3.2 = \lim_{x \rightarrow 0^+} f(x) - g(x) & .3.3 = \lim_{x \rightarrow 0^-} f(x) g(x) \\ .3.4 = \lim_{x \rightarrow 0^-} \frac{f(x)}{g(x)} & .3.5 = \lim_{x \rightarrow 0} f(x) g(x) & \text{Math@MUT} \end{array} \right] \right]$$

$$No03 = \left[ \left[ \left[ \begin{array}{ccc} f(x) = \text{floor}(x) & & \\ .1 = \lim_{x \rightarrow 4^-} f(x) & .2 = \lim_{x \rightarrow 4^+} f(x) & .3 = \lim_{x \rightarrow 4} f(x) \\ .4 = \lim_{x \rightarrow (-4.2)^-} f(x) & .5 = \lim_{x \rightarrow (-4.2)^+} f(x) & .6 = \lim_{x \rightarrow (-4.2)} f(x) \end{array} \right] \right] \right]$$



[illegible]

$$No0I = \left[ \begin{array}{lll} .1 = \lim_{x \rightarrow 2} 3x^2 - 2 & .2 = \lim_{x \rightarrow 1} (3x^3 - 3x^2 - 1)(4x + 2) & .3 = \lim_{x \rightarrow 4} \frac{2x - 1}{5x^3 + x^2 - 2x} \\ .4 = \lim_{x \rightarrow 49} \frac{49 - x}{\sqrt{x} - 7} & .5 = \lim_{x \rightarrow 3} \frac{\sqrt{x - 2} - 1}{-3 + x} & .6 = \lim_{x \rightarrow 1} \sqrt{3 - x} \\ .7 = \lim_{x \rightarrow (-1)} |x - 1| & .8 = \lim_{x \rightarrow 2} \frac{|x - 2|}{x - 2} & .9 = \lim_{x \rightarrow 2+} \frac{|x^2 - 4|}{x - 2} \\ .10 = \lim_{x \rightarrow 0-} \frac{3}{x} + \frac{3}{|x|} & .11 = \lim_{x \rightarrow (1/3)} \frac{3x^2 + 5x - 2}{|3x - 1|} & \end{array} \right], \quad , \quad \left[ \begin{array}{l} \left[ \begin{array}{c} P \\ V \\ S \\ S \end{array} \right] \\ \& \\ \left[ \begin{array}{c} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{array} \right] \end{array} \right]$$

$$No02 = \left[ \left[ \begin{array}{l} f(x) = \begin{cases} \frac{2x}{|x|} & x \neq 0 \\ 2 & x = 0 \end{cases}, g(x) = 4x - 5 \\ \begin{array}{lll} .3.1 = \lim_{x \rightarrow 0^+} f(x) + g(x) & .3.2 = \lim_{x \rightarrow 0^+} f(x) - g(x) & .3.3 = \lim_{x \rightarrow 0^-} f(x) g(x) \\ .3.4 = \lim_{x \rightarrow 0^-} \frac{f(x)}{g(x)} & .3.5 = \lim_{x \rightarrow 0} f(x) + g(x) & \text{Math@MUT} \end{array} \end{array} \right] \right]$$

$$No03 = \left[ \left[ \left[ \begin{array}{ccc} f(x) = \text{floor}(x) & & \\ .1 = \lim_{x \rightarrow 2^-} f(x) & .2 = \lim_{x \rightarrow 2^+} f(x) & .3 = \lim_{x \rightarrow 2} f(x) \\ .4 = \lim_{x \rightarrow (-5.7)^-} f(x) & .5 = \lim_{x \rightarrow (-5.7)^+} f(x) & .6 = \lim_{x \rightarrow (-5.7)} f(x) \end{array} \right] \right] \right]$$

[illegible]

[illegible]

$$No01 = \left[ \begin{array}{lll} .1 = \lim_{x \rightarrow 2} 5x^3 - x^2 + 4x - 4 & .2 = \lim_{x \rightarrow 3} (x^3 + 3x^2 - 3x)(4x - 3) & .3 = \lim_{x \rightarrow 3} \frac{2x - 2}{3x - 3} \\ .4 = \lim_{x \rightarrow 16} \frac{16 - x}{4 - \sqrt{x}} & .5 = \lim_{x \rightarrow 5} \frac{x - 5}{\sqrt{x - 4} - 1} & .6 = \lim_{x \rightarrow 1} \sqrt{x - 1} \\ .7 = \lim_{x \rightarrow (-3)} |x - 1| & .8 = \lim_{x \rightarrow 2} \frac{2 - x}{|x - 2|} & .9 = \lim_{x \rightarrow 4+} \frac{x - 4}{|x^2 - 9x + 20|} \\ .10 = \lim_{x \rightarrow 0-} \frac{4}{x} + \frac{4}{|x|} & .11 = \lim_{x \rightarrow (1/2)} \frac{6x^2 + 5x - 4}{|2x - 1|} & \end{array} \right], \quad , \quad \left[ \begin{array}{l} \left[ \begin{array}{c} P \\ V \\ S \\ S \end{array} \right] \\ \& \\ \left[ \begin{array}{c} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{array} \right] \end{array} \right]$$

$$No02 = \left[ \left[ \begin{array}{l} f(x) = x - 4, g(x) = \begin{cases} \frac{|x|}{x} & x \neq 0 \\ 1 & x = 0 \end{cases} \\ \begin{array}{lll} .3.1 = \lim_{x \rightarrow 0^-} f(x) + g(x) & .3.2 = \lim_{x \rightarrow 0^+} f(x) - g(x) & .3.3 = \lim_{x \rightarrow 0^+} f(x) g(x) \\ .3.4 = \lim_{x \rightarrow 0^-} \frac{f(x)}{g(x)} & .3.5 = \lim_{x \rightarrow 0} \frac{g(x)}{f(x)} & \text{Math@MUT} \end{array} \end{array} \right] \right]$$

$$No03 = \left[ \left[ \left[ \begin{array}{ccc} f(x) = \text{floor}(x) & & \\ .1 = \lim_{x \rightarrow 4-} f(x) & .2 = \lim_{x \rightarrow 4+} f(x) & .3 = \lim_{x \rightarrow 4} f(x) \\ .4 = \lim_{x \rightarrow (-5.6)-} f(x) & .5 = \lim_{x \rightarrow (-5.6)+} f(x) & .6 = \lim_{x \rightarrow (-5.6)} f(x) \end{array} \right] \right] \right]$$

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$$No0I = \left[ \begin{array}{lll} .1 = \lim_{x \rightarrow 1} 2x^3 + 4x + 3 & .2 = \lim_{x \rightarrow 1} (5x^2 + 3x - 1)(4x^2 + 3x + 3) & .3 = \lim_{x \rightarrow 4} \frac{3x - 3}{4x^2 - 3x + 1} \\ .4 = \lim_{x \rightarrow 16} \frac{16 - x}{4 - \sqrt{x}} & .5 = \lim_{x \rightarrow 27} \frac{\sqrt{x - 2} - 5}{27 - x} & .6 = \lim_{x \rightarrow 1} \sqrt{1 - x} \\ .7 = \lim_{x \rightarrow (-2)} |x + 3| & .8 = \lim_{x \rightarrow 1} \frac{x - 1}{|x - 1|} & .9 = \lim_{x \rightarrow 2^-} \frac{x - 2}{|x^2 - 6x + 8|} \\ .10 = \lim_{x \rightarrow 0^+} \frac{3}{x} - \frac{3}{|x|} & .11 = \lim_{x \rightarrow (4/3)} \frac{12x^2 - 25x + 12}{|3x - 4|} & \end{array} \right],$$

$$No02 = \left[ \left[ \begin{array}{l} f(x) = 3x - 5, g(x) = \begin{cases} \frac{3|x|}{x} & x \neq 0 \\ 3 & x = 0 \end{cases} \\ \begin{array}{lll} .3.1 = \lim_{x \rightarrow 0^+} f(x) + g(x) & .3.2 = \lim_{x \rightarrow 0^-} f(x) - g(x) & .3.3 = \lim_{x \rightarrow 0^+} f(x) g(x) \\ .3.4 = \lim_{x \rightarrow 0^-} \frac{f(x)}{g(x)} & .3.5 = \lim_{x \rightarrow 0} f(x) - g(x) & \text{Math@MUT} \end{array} \end{array} \right] \right]$$

$$No03 = \left[ \begin{array}{c} \left[ \begin{array}{c} f(x) = \text{floor}(x) \\ \left[ \begin{array}{ccc} .1 = \lim_{x \rightarrow 3^-} f(x) & .2 = \lim_{x \rightarrow 3^+} f(x) & .3 = \lim_{x \rightarrow 3} f(x) \\ .4 = \lim_{x \rightarrow (-4.9)^-} f(x) & .5 = \lim_{x \rightarrow (-4.9)^+} f(x) & .6 = \lim_{x \rightarrow (-4.9)} f(x) \end{array} \right] \end{array} \right] \end{array} \right]$$

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$$No0I = \left[ \begin{array}{ccc} .1 = \lim_{x \rightarrow 2} 2x^2 - 3x & .2 = \lim_{x \rightarrow 2} (3x^2 - x - 4)(2x - 1) & .3 = \lim_{x \rightarrow 4} \frac{2x^2 - x}{2x - 4} \\ .4 = \lim_{x \rightarrow 100} \frac{10 - \sqrt{x}}{100 - x} & .5 = \lim_{x \rightarrow 19} \frac{\sqrt{-3 + x} - 4}{x - 19} & .6 = \lim_{x \rightarrow 1} \sqrt{2 - x} \\ .7 = \lim_{x \rightarrow (-1)} |-3 + x| & .8 = \lim_{x \rightarrow 1} \frac{x - 1}{|x - 1|} & .9 = \lim_{x \rightarrow 4+} \frac{|x^2 - x - 12|}{x - 4} \\ .10 = \lim_{x \rightarrow 0+} \frac{3}{x} + \frac{3}{|x|} & .11 = \lim_{x \rightarrow (2/5)} \frac{|5x - 2|}{10x^2 + 11x - 6} & \end{array} \right],$$

$$No02 = \left[ \left[ \left[ \begin{matrix} f(x) = 2x - 5, g(x) = \begin{cases} \frac{5|x|}{x} & x \neq 0 \\ 5 & x = 0 \end{cases} \end{matrix} \right] \right. \right. \\ \left. \left[ \begin{matrix} .3.1 = \lim_{x \rightarrow 0^-} f(x) + g(x) & .3.2 = \lim_{x \rightarrow 0^-} f(x) - g(x) & .3.3 = \lim_{x \rightarrow 0^+} f(x) g(x) \\ .3.4 = \lim_{x \rightarrow 0^+} \frac{f(x)}{g(x)} & .3.5 = \lim_{x \rightarrow 0} g(x) - f(x) & Math@MUT \end{matrix} \right] \right] \right]$$

$$No03 = \left[ \begin{array}{c} f(x) = \text{ceil}(x) \\ \left[ \begin{array}{ccc} .1 = \lim_{x \rightarrow 4-} f(x) & .2 = \lim_{x \rightarrow 4+} f(x) & .3 = \lim_{x \rightarrow 4} f(x) \\ .4 = \lim_{x \rightarrow (-5.1)-} f(x) & .5 = \lim_{x \rightarrow (-5.1)+} f(x) & .6 = \lim_{x \rightarrow (-5.1)} f(x) \end{array} \right] \end{array} \right]$$

[illegible]





[illegible]

$$No0I = \left[ \begin{array}{ccc} .1 = \lim_{x \rightarrow 1} 2x^2 + x & .2 = \lim_{x \rightarrow 3} (5x + 1)(2x^3 - x^2 - x) & .3 = \lim_{x \rightarrow 2} \frac{x - 2}{4x^3 + 4x^2 - 3x} \\ .4 = \lim_{x \rightarrow 100} \frac{x - 100}{\sqrt{x} - 10} & .5 = \lim_{x \rightarrow 4} \frac{x - 4}{\sqrt{-3 + x} - 1} & .6 = \lim_{x \rightarrow 2} \sqrt{2 - x} \\ .7 = \lim_{x \rightarrow (-3)} |-3 + x| & .8 = \lim_{x \rightarrow 1} \frac{x - 1}{|x - 1|} & .9 = \lim_{x \rightarrow 3+} \frac{-3 + x}{|x^2 - 7x + 12|} \\ .10 = \lim_{x \rightarrow 0+} \frac{2}{|x|} - \frac{2}{x} & .11 = \lim_{x \rightarrow (5/2)} \frac{8x^2 - 14x - 15}{|2x - 5|} & \end{array} \right],$$

$$No02 = \left[ \left[ \left[ \begin{array}{l} f(x) = 4x - 2, g(x) = \begin{cases} x & x \neq 0 \\ |x| & x = 0 \end{cases} \\ \end{array} \right] \left[ \begin{array}{lll} .3.1 = \lim_{x \rightarrow 0+} f(x) + g(x) & .3.2 = \lim_{x \rightarrow 0-} f(x) - g(x) & .3.3 = \lim_{x \rightarrow 0-} f(x) g(x) \\ .3.4 = \lim_{x \rightarrow 0+} \frac{f(x)}{g(x)} & .3.5 = \lim_{x \rightarrow 0} \frac{f(x)}{g(x)} & \text{Math@MUT} \end{array} \right] \right] \right]$$

[illegible]

[illegible]

$$No01 = \left[ \begin{array}{lll} .1 = \lim_{x \rightarrow 2} 2x^3 - 3x^2 - 1 & .2 = \lim_{x \rightarrow 1} (x-1)(2x^3 - 2x^2 - 4x) & .3 = \lim_{x \rightarrow 3} \frac{5x^2 - 2}{x^2 - 2x - 4} \\ .4 = \lim_{x \rightarrow 64} \frac{8 - \sqrt{x}}{64 - x} & .5 = \lim_{x \rightarrow (-4)} \frac{x+4}{1 - \sqrt{x+5}} & .6 = \lim_{x \rightarrow 1} \sqrt{x-2} \\ .7 = \lim_{x \rightarrow 2} |x+1| & .8 = \lim_{x \rightarrow 3} \frac{3-x}{|-3+x|} & .9 = \lim_{x \rightarrow 3-} \frac{-3+x}{|x^2 - 7x + 12|} \\ .10 = \lim_{x \rightarrow 0+} \frac{2}{|x|} - \frac{2}{x} & .11 = \lim_{x \rightarrow (1/3)} \frac{|3x-1|}{15x^2 + 7x - 4} & \end{array} \right],$$

$$No3 = \left[ \begin{array}{c} f(x) = \text{floor}(x) \\ \left[ \begin{array}{ccc} .1 = \lim_{x \rightarrow 4-} f(x) & .2 = \lim_{x \rightarrow 4+} f(x) & .3 = \lim_{x \rightarrow 4} f(x) \\ .4 = \lim_{x \rightarrow (-5.5)-} f(x) & .5 = \lim_{x \rightarrow (-5.5)+} f(x) & .6 = \lim_{x \rightarrow (-5.5)} f(x) \end{array} \right] \end{array} \right]$$



[illegible]





[illegible]

$$No01 = \left[ \begin{array}{lll} .1 = \lim_{x \rightarrow 1} 2x^2 + x - 4 & .2 = \lim_{x \rightarrow 2} (3x + 2)(3x^3 - 4x^2 - 2x) & .3 = \lim_{x \rightarrow 3} \frac{3x + 1}{2x^2 - 3} \\ .4 = \lim_{x \rightarrow 1} \frac{1 - x}{\sqrt{x} - 1} & .5 = \lim_{x \rightarrow 3} \frac{2 - \sqrt{x + 1}}{3 - x} & .6 = \lim_{x \rightarrow 1} \sqrt{x - 2} \\ .7 = \lim_{x \rightarrow (-2)} |x + 2| & .8 = \lim_{x \rightarrow 2} \frac{|x - 2|}{x - 2} & .9 = \lim_{x \rightarrow 3^-} \frac{-3 + x}{|x^2 - x - 6|} \\ .10 = \lim_{x \rightarrow 0^+} \frac{4}{|x|} - \frac{4}{x} & .11 = \lim_{x \rightarrow (3/5)} \frac{|5x - 3|}{20x^2 - 37x + 15} & \end{array} \right],$$

$$No02 = \left[ \left[ \left[ \begin{array}{l} f(x) = \begin{cases} \frac{2|x|}{x} & x \neq 0 \\ 2 & x = 0 \end{cases}, g(x) = x + 4 \end{array} \right] \right. \right. \\ \left. \left[ \begin{array}{lll} .3.1 = \lim_{x \rightarrow 0+} f(x) + g(x) & .3.2 = \lim_{x \rightarrow 0+} f(x) - g(x) & .3.3 = \lim_{x \rightarrow 0-} f(x) g(x) \\ .3.4 = \lim_{x \rightarrow 0-} \frac{f(x)}{g(x)} & .3.5 = \lim_{x \rightarrow 0} g(x) - f(x) & Math@MUT \end{array} \right] \right] \right]$$

$$No03 = \left[ \left[ \left[ \begin{array}{ccc} f(x) = \text{floor}(x) & & \\ .1 = \lim_{x \rightarrow 1^-} f(x) & .2 = \lim_{x \rightarrow 1^+} f(x) & .3 = \lim_{x \rightarrow 1} f(x) \\ .4 = \lim_{x \rightarrow (-5.6)^-} f(x) & .5 = \lim_{x \rightarrow (-5.6)^+} f(x) & .6 = \lim_{x \rightarrow (-5.6)} f(x) \end{array} \right] \right] \right]$$

[illegible]

[illegible]



[illegible]

$$No0I = \left[ \begin{array}{ccc} .1 = \lim_{x \rightarrow 2} 5x^2 + 2 & .2 = \lim_{x \rightarrow 2} (-3 + x)(4x^2 - 3x + 1) & .3 = \lim_{x \rightarrow 2} \frac{2x^2 - 3}{x^2 + 1} \\ .4 = \lim_{x \rightarrow 1} \frac{\sqrt{x} - 1}{1 - x} & .5 = \lim_{x \rightarrow 6} \frac{x - 6}{\sqrt{x - 5} - 1} & .6 = \lim_{x \rightarrow 3} \sqrt{x - 1} \\ .7 = \lim_{x \rightarrow 3} |x + 2| & .8 = \lim_{x \rightarrow 1} \frac{|x - 1|}{1 - x} & .9 = \lim_{x \rightarrow 5^-} \frac{x - 5}{|x^2 - 3x - 10|} \\ .10 = \lim_{x \rightarrow 0^+} \frac{3}{x} - \frac{3}{|x|} & .11 = \lim_{x \rightarrow (4/5)} \frac{|5x - 4|}{20x^2 - 11x - 4} & \end{array} \right],$$

$$No02 = \left[ \left[ \begin{array}{l} \left[ f(x) = 4x + 5, g(x) = \begin{cases} \frac{4x}{|x|} & x \neq 0 \\ 4 & x = 0 \end{cases} \right] \\ \left[ \begin{array}{lll} .3.1 = \lim_{x \rightarrow 0^+} f(x) + g(x) & .3.2 = \lim_{x \rightarrow 0^-} f(x) - g(x) & .3.3 = \lim_{x \rightarrow 0^-} f(x) g(x) \\ .3.4 = \lim_{x \rightarrow 0^+} \frac{f(x)}{g(x)} & .3.5 = \lim_{x \rightarrow 0} g(x) - f(x) & Math@MUT \end{array} \right] \right] \right]$$

$$No03 = \left[ \left[ \left[ \begin{array}{ccc} f(x) = \text{floor}(x) & & \\ .1 = \lim_{x \rightarrow 1^-} f(x) & .2 = \lim_{x \rightarrow 1^+} f(x) & .3 = \lim_{x \rightarrow 1} f(x) \\ .4 = \lim_{x \rightarrow (-1.5)^-} f(x) & .5 = \lim_{x \rightarrow (-1.5)^+} f(x) & .6 = \lim_{x \rightarrow (-1.5)} f(x) \end{array} \right] \right] \right]$$

[illegible]

[illegible]

$$No01 = \left[ \begin{array}{lll} .1 = \lim_{x \rightarrow 3} 5x^2 + 4x + 2 & .2 = \lim_{x \rightarrow 1} (x^2 + 3)(x^2 + 3x - 1) & .3 = \lim_{x \rightarrow 4} \frac{2x^2 - 1}{x^2 + 3x - 2} \\ .4 = \lim_{x \rightarrow 16} \frac{x - 16}{\sqrt{x} - 4} & .5 = \lim_{x \rightarrow 13} \frac{x - 13}{\sqrt{x - 4} - 3} & .6 = \lim_{x \rightarrow 3} \sqrt{x - 2} \\ .7 = \lim_{x \rightarrow 3} |x + 2| & .8 = \lim_{x \rightarrow 1} \frac{|x - 1|}{x - 1} & .9 = \lim_{x \rightarrow 2+} \frac{|x^2 + x - 6|}{x - 2} \\ .10 = \lim_{x \rightarrow 0+} \frac{2}{x} + \frac{2}{|x|} & .11 = \lim_{x \rightarrow (2/3)} \frac{|3x - 2|}{15x^2 - 22x + 8} & \end{array} \right],$$

$$No02 = \left[ \left[ \left[ \begin{matrix} f(x) = -3 + x, g(x) = \begin{cases} \frac{2x}{|x|} & x \neq 0 \\ 2 & x = 0 \end{cases} \end{matrix} \right] \right. \right. \\ \left. \left[ \begin{matrix} .3.1 = \lim_{x \rightarrow 0^-} f(x) + g(x) & .3.2 = \lim_{x \rightarrow 0^-} f(x) - g(x) & .3.3 = \lim_{x \rightarrow 0^+} f(x) g(x) \\ .3.4 = \lim_{x \rightarrow 0^+} \frac{f(x)}{g(x)} & .3.5 = \lim_{x \rightarrow 0} f(x) g(x) & Math@MUT \end{matrix} \right] \right] \right]$$

$$No03 = \left[ \left[ \left[ \begin{array}{ccc} f(x) = \text{floor}(x) & & \\ .1 = \lim_{x \rightarrow 5^-} f(x) & .2 = \lim_{x \rightarrow 5^+} f(x) & .3 = \lim_{x \rightarrow 5} f(x) \\ .4 = \lim_{x \rightarrow (-1.8)^-} f(x) & .5 = \lim_{x \rightarrow (-1.8)^+} f(x) & .6 = \lim_{x \rightarrow (-1.8)} f(x) \end{array} \right] \right] \right]$$

[illegible]



[illegible]

$$No01 = \left[ \begin{array}{lll} .1 = \lim_{x \rightarrow 1} x^3 + 4x^2 + 2x - 1 & .2 = \lim_{x \rightarrow 2} (2x^3 - 4x^2 - 2)(5x - 2) & .3 = \lim_{x \rightarrow 3} \frac{4x + 2}{4x^3 + 2x^2 + 4x} \\ .4 = \lim_{x \rightarrow 64} \frac{\sqrt{x} - 8}{x - 64} & .5 = \lim_{x \rightarrow 5} \frac{\sqrt{x - 4} - 1}{x - 5} & .6 = \lim_{x \rightarrow 3} \sqrt{3 - x} \\ .7 = \lim_{x \rightarrow 3} |x - 2| & .8 = \lim_{x \rightarrow 2} \frac{|x - 2|}{2 - x} & .9 = \lim_{x \rightarrow 1+} \frac{|x^2 - 3x + 2|}{x - 1} \\ .10 = \lim_{x \rightarrow 0+} \frac{2}{|x|} - \frac{2}{x} & .11 = \lim_{x \rightarrow (3/2)} \frac{|2x - 3|}{8x^2 - 2x - 15} & \end{array} \right],$$

$$No02 = \left[ \left[ \left[ \begin{array}{c} f(x) = 3x - 1, g(x) = \begin{cases} \frac{|x|}{x} & x \neq 0 \\ 1 & x = 0 \end{cases} \\ \end{array} \right] \left[ \begin{array}{ccc} .3.1 = \lim_{x \rightarrow 0+} f(x) + g(x) & .3.2 = \lim_{x \rightarrow 0-} f(x) - g(x) & .3.3 = \lim_{x \rightarrow 0-} f(x) g(x) \\ .3.4 = \lim_{x \rightarrow 0+} \frac{f(x)}{g(x)} & .3.5 = \lim_{x \rightarrow 0} g(x) - f(x) & Math@MUT \end{array} \right] \right] \right]$$

$$No3 = \left[ \begin{array}{c} f(x) = \text{ceil}(x) \\ \left[ \begin{array}{ccc} .1 = \lim_{x \rightarrow 2^-} f(x) & .2 = \lim_{x \rightarrow 2^+} f(x) & .3 = \lim_{x \rightarrow 2} f(x) \\ .4 = \lim_{x \rightarrow (-3.2)^-} f(x) & .5 = \lim_{x \rightarrow (-3.2)^+} f(x) & .6 = \lim_{x \rightarrow (-3.2)} f(x) \end{array} \right] \end{array} \right]$$

[illegible]



$$No01 = \left[ \begin{array}{lll} .1 = \lim_{x \rightarrow 3} 5x^2 + x + 1 & .2 = \lim_{x \rightarrow 3} (3x^2 + 3)(x^2 + 3x - 1) & .3 = \lim_{x \rightarrow 4} \frac{2x^2 - 4x + 4}{5x - 1} \\ .4 = \lim_{x \rightarrow 4} \frac{4 - x}{2 - \sqrt{x}} & .5 = \lim_{x \rightarrow 21} \frac{5 - \sqrt{x + 4}}{x - 21} & .6 = \lim_{x \rightarrow 1} \sqrt{-3 + x} \\ .7 = \lim_{x \rightarrow (-2)} |x - 2| & .8 = \lim_{x \rightarrow 1} \frac{1 - x}{|x - 1|} & .9 = \lim_{x \rightarrow 3+} \frac{|x^2 - 2x - 3|}{-3 + x} \\ .10 = \lim_{x \rightarrow 0-} \frac{4}{x} - \frac{4}{|x|} & .11 = \lim_{x \rightarrow (1/4)} \frac{12x^2 + 13x - 4}{|4x - 1|} & \text{Math@MUT} \end{array} \right], \quad \left[ \begin{array}{l} \left[ \begin{array}{c} P \\ V \\ S \\ S \end{array} \right] \\ \& \\ \left[ \begin{array}{c} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{array} \right] \end{array} \right]$$

$$No03 = \left[ \begin{array}{c} f(x) = \text{floor}(x) \\ \left[ \begin{array}{ccc} .1 = \lim_{x \rightarrow 4^-} f(x) & .2 = \lim_{x \rightarrow 4^+} f(x) & .3 = \lim_{x \rightarrow 4} f(x) \\ .4 = \lim_{x \rightarrow (-5.4)^-} f(x) & .5 = \lim_{x \rightarrow (-5.4)^+} f(x) & .6 = \lim_{x \rightarrow (-5.4)} f(x) \end{array} \right] \end{array} \right]$$

[illegible]

$$No0I = \left[ \begin{array}{lll} .1 = \lim_{x \rightarrow 3} x^2 - x - 3 & .2 = \lim_{x \rightarrow 3} (2x^3 + 2x^2 + 1)(x + 1) & .3 = \lim_{x \rightarrow 3} \frac{x - 4}{5x^2 - 4x + 3} \\ .4 = \lim_{x \rightarrow 100} \frac{100 - x}{10 - \sqrt{x}} & .5 = \lim_{x \rightarrow (-3)} \frac{1 - \sqrt{x + 4}}{-3 - x} & .6 = \lim_{x \rightarrow 3} \sqrt{1 - x} \\ .7 = \lim_{x \rightarrow (-2)} |x + 3| & .8 = \lim_{x \rightarrow 1} \frac{|x - 1|}{1 - x} & .9 = \lim_{x \rightarrow 1^-} \frac{x - 1}{|x^2 - 3x + 2|} \\ .10 = \lim_{x \rightarrow 0^-} \frac{2}{x} - \frac{2}{|x|} & .11 = \lim_{x \rightarrow (1/2)} \frac{|2x - 1|}{2x^2 - 7x + 3} & \end{array} \right],$$

$$No02 = \left[ \left[ \left[ \begin{matrix} f(x) = x - 2, g(x) = \begin{cases} \frac{5|x|}{x} & x \neq 0 \\ 5 & x = 0 \end{cases} \end{matrix} \right] \right. \right. \\ \left. \left[ \begin{matrix} .3.1 = \lim_{x \rightarrow 0^+} f(x) + g(x) & .3.2 = \lim_{x \rightarrow 0^-} f(x) - g(x) & .3.3 = \lim_{x \rightarrow 0^-} f(x) g(x) \\ .3.4 = \lim_{x \rightarrow 0^+} \frac{f(x)}{g(x)} & .3.5 = \lim_{x \rightarrow 0} g(x) - f(x) & Math@MUT \end{matrix} \right] \right] \right]$$

$$No03 = \left[ \left[ \left[ \begin{array}{ccc} f(x) = \text{ceil}(x) & & \\ .1 = \lim_{x \rightarrow 2^-} f(x) & .2 = \lim_{x \rightarrow 2^+} f(x) & .3 = \lim_{x \rightarrow 2} f(x) \\ .4 = \lim_{x \rightarrow (-3.7)^-} f(x) & .5 = \lim_{x \rightarrow (-3.7)^+} f(x) & .6 = \lim_{x \rightarrow (-3.7)} f(x) \end{array} \right] \right] \right]$$

[illegible]



[illegible]

$$No01 = \left[ \begin{array}{lll} .1 = \lim_{x \rightarrow 1} 2x^2 - 3x & .2 = \lim_{x \rightarrow 1} (2x^2 + x - 1)(2x + 3) & .3 = \lim_{x \rightarrow 1} \frac{x^3 - 2x^2 + 3x}{3x + 2} \\ .4 = \lim_{x \rightarrow 64} \frac{\sqrt{x} - 8}{64 - x} & .5 = \lim_{x \rightarrow 13} \frac{13 - x}{\sqrt{x - 4} - 3} & .6 = \lim_{x \rightarrow 3} \sqrt{x - 2} \\ .7 = \lim_{x \rightarrow (-1)} |x + 2| & .8 = \lim_{x \rightarrow 1} \frac{|x - 1|}{x - 1} & .9 = \lim_{x \rightarrow 5+} \frac{x - 5}{|x^2 - 6x + 5|} \\ .10 = \lim_{x \rightarrow 0-} \frac{1}{x} - \frac{1}{|x|} & .11 = \lim_{x \rightarrow (4/3)} \frac{3x^2 + 2x - 8}{|3x - 4|} & \end{array} \right],$$

$$No02 = \left[ \left[ \left[ \begin{array}{l} f(x) = 3x + 1, g(x) = \begin{cases} \frac{4x}{|x|} & x \neq 0 \\ 4 & x = 0 \end{cases} \end{array} \right] \left[ \begin{array}{l} .3.1 = \lim_{x \rightarrow 0^+} f(x) + g(x) \quad .3.2 = \lim_{x \rightarrow 0^-} f(x) - g(x) \quad .3.3 = \lim_{x \rightarrow 0^+} f(x) g(x) \\ .3.4 = \lim_{x \rightarrow 0^-} \frac{f(x)}{g(x)} \quad .3.5 = \lim_{x \rightarrow 0} \frac{f(x)}{g(x)} \end{array} \right] \right] \right] \quad \text{Math@MUT}$$

$$No3 = \left[ \begin{array}{c} f(x) = \text{ceil}(x) \\ \left[ \begin{array}{ccc} .1 = \lim_{x \rightarrow 1^-} f(x) & .2 = \lim_{x \rightarrow 1^+} f(x) & .3 = \lim_{x \rightarrow 1} f(x) \\ .4 = \lim_{x \rightarrow (-5.7)^-} f(x) & .5 = \lim_{x \rightarrow (-5.7)^+} f(x) & .6 = \lim_{x \rightarrow (-5.7)} f(x) \end{array} \right] \end{array} \right]$$

[illegible]

[illegible]

[illegible]

$$No0I = \left[ \begin{array}{ccc} .1 = \lim_{x \rightarrow 1} 3x^3 - 3x^2 + x - 4 & .2 = \lim_{x \rightarrow 1} (2x + 4)(5x^2 - 2) & .3 = \lim_{x \rightarrow 4} \frac{3x^2 - x + 2}{x - 2} \\ .4 = \lim_{x \rightarrow 64} \frac{8 - \sqrt{x}}{x - 64} & .5 = \lim_{x \rightarrow 7} \frac{7 - x}{\sqrt{-3 + x} - 2} & .6 = \lim_{x \rightarrow 3} \sqrt{2 - x} \\ .7 = \lim_{x \rightarrow (-2)} |x - 2| & .8 = \lim_{x \rightarrow 2} \frac{|x - 2|}{2 - x} & .9 = \lim_{x \rightarrow 2+} \frac{x - 2}{|x^2 + 2x - 8|} \\ .10 = \lim_{x \rightarrow 0-} \frac{5}{x} + \frac{5}{|x|} & .11 = \lim_{x \rightarrow (4/3)} \frac{|3x - 4|}{3x^2 - 13x + 12} & \end{array} \right],$$

$$No02 = \left[ \left[ \left[ f(x) = \begin{cases} \frac{x}{|x|} & x \neq 0 \\ 1 & x = 0 \end{cases}, g(x) = x + 4 \right] \right. \right. \\ \left. \left[ \begin{array}{lll} .3.1 = \lim_{x \rightarrow 0^-} f(x) + g(x) & .3.2 = \lim_{x \rightarrow 0^+} f(x) - g(x) & .3.3 = \lim_{x \rightarrow 0^+} f(x) g(x) \\ .3.4 = \lim_{x \rightarrow 0^-} \frac{f(x)}{g(x)} & .3.5 = \lim_{x \rightarrow 0} f(x) + g(x) & \text{Math@MUT} \end{array} \right] \right]$$

$$No03 = \left[ \left[ \left[ \begin{array}{ccc} f(x) = \text{floor}(x) & & \\ .1 = \lim_{x \rightarrow 4-} f(x) & .2 = \lim_{x \rightarrow 4+} f(x) & .3 = \lim_{x \rightarrow 4} f(x) \\ .4 = \lim_{x \rightarrow (-4,4)-} f(x) & .5 = \lim_{x \rightarrow (-4,4)+} f(x) & .6 = \lim_{x \rightarrow (-4,4)} f(x) \end{array} \right] \right] \right]$$

[illegible]

[illegible]

$$No01 = \left[ \begin{array}{lll} .1 = \lim_{x \rightarrow 2} 3x^2 - 3x - 1 & .2 = \lim_{x \rightarrow 1} (x^2 + x + 3)(x + 3) & .3 = \lim_{x \rightarrow 4} \frac{5x^3 - 2x^2 + 3x}{3x - 1} \\ .4 = \lim_{x \rightarrow 4} \frac{4 - x}{2 - \sqrt{x}} & .5 = \lim_{x \rightarrow 14} \frac{\sqrt{x - 5} - 3}{x - 14} & .6 = \lim_{x \rightarrow 2} \sqrt{x - 2} \\ .7 = \lim_{x \rightarrow (-3)} |x + 2| & .8 = \lim_{x \rightarrow 3} \frac{3 - x}{|-3 + x|} & .9 = \lim_{x \rightarrow 4} \frac{x - 4}{|x^2 - 16|} \\ .10 = \lim_{x \rightarrow 0+} \frac{2}{x} - \frac{2}{|x|} & .11 = \lim_{x \rightarrow (1/6)} \frac{|6x - 1|}{6x^2 - 13x + 2} & \end{array} \right],$$

$$No02 = \left[ \left[ \left[ \begin{matrix} f(x) = -3 + x, g(x) = \begin{cases} \frac{4|x|}{x} & x \neq 0 \\ 4 & x = 0 \end{cases} \end{matrix} \right] \right. \right. \\ \left. \left[ \begin{matrix} .3.1 = \lim_{x \rightarrow 0^+} f(x) + g(x) & .3.2 = \lim_{x \rightarrow 0^-} f(x) - g(x) & .3.3 = \lim_{x \rightarrow 0^-} f(x) g(x) \\ .3.4 = \lim_{x \rightarrow 0^+} \frac{f(x)}{g(x)} & .3.5 = \lim_{x \rightarrow 0} f(x) - g(x) & Math@MUT \end{matrix} \right] \right] \right]$$

$$No03 = \left[ \left[ \left[ \begin{array}{ccc} f(x) = \text{floor}(x) & & \\ .1 = \lim_{x \rightarrow 4-} f(x) & .2 = \lim_{x \rightarrow 4+} f(x) & .3 = \lim_{x \rightarrow 4} f(x) \\ .4 = \lim_{x \rightarrow (-5.7)-} f(x) & .5 = \lim_{x \rightarrow (-5.7)+} f(x) & .6 = \lim_{x \rightarrow (-5.7)} f(x) \end{array} \right] \right] \right]$$

[illegible]







[illegible]

[illegible]

$$No01 = \left[ \begin{array}{lll} .1 = \lim_{x \rightarrow 2} 3x^3 + 4x^2 + 4x - 1 & .2 = \lim_{x \rightarrow 2} (3x^2 - x + 2)(x - 2) & .3 = \lim_{x \rightarrow 4} \frac{3x^2 + x + 4}{2x^2 - 2x + 3} \\ .4 = \lim_{x \rightarrow 9} \frac{x - 9}{3 - \sqrt{x}} & .5 = \lim_{x \rightarrow 14} \frac{14 - x}{4 - \sqrt{x + 2}} & .6 = \lim_{x \rightarrow 1} \sqrt{3 - x} \\ .7 = \lim_{x \rightarrow (-1)} |x + 1| & .8 = \lim_{x \rightarrow 2} \frac{x - 2}{|x - 2|} & .9 = \lim_{x \rightarrow 1+} \frac{x - 1}{|x^2 + x - 2|} \\ .10 = \lim_{x \rightarrow 0+} \frac{1}{x} - \frac{1}{|x|} & .11 = \lim_{x \rightarrow (1/3)} \frac{|3x - 1|}{3x^2 + 11x - 4} & \text{Math@MUT} \end{array} \right], \quad \left[ \begin{array}{l} \left[ \begin{array}{c} P \\ V \\ S \\ S \end{array} \right] \\ \& \\ \left[ \begin{array}{c} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{array} \right] \end{array} \right]$$

$$No02 = \left[ \left[ \left[ \begin{matrix} f(x) = 5x - 2, g(x) = \begin{cases} \frac{2|x|}{x} & x \neq 0 \\ 2 & x = 0 \end{cases} \end{matrix} \right] \left[ \begin{matrix} .3.1 = \lim_{x \rightarrow 0^-} f(x) + g(x) & .3.2 = \lim_{x \rightarrow 0^+} f(x) - g(x) & .3.3 = \lim_{x \rightarrow 0^-} f(x) g(x) \\ .3.4 = \lim_{x \rightarrow 0^+} \frac{f(x)}{g(x)} & .3.5 = \lim_{x \rightarrow 0} \frac{g(x)}{f(x)} & \text{Math@MUT} \end{matrix} \right] \right] \right]$$

$$No3 = \left[ \left[ \left[ \begin{array}{ccc} f(x) = \text{ceil}(x) & & \\ .1 = \lim_{x \rightarrow 5^-} f(x) & .2 = \lim_{x \rightarrow 5^+} f(x) & .3 = \lim_{x \rightarrow 5} f(x) \\ .4 = \lim_{x \rightarrow (-2.9)^-} f(x) & .5 = \lim_{x \rightarrow (-2.9)^+} f(x) & .6 = \lim_{x \rightarrow (-2.9)} f(x) \end{array} \right] \right] \right]$$

[illegible]

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 Limit03 for No.646117

$$No01 = \left[ \begin{array}{lll} .1 = \lim_{x \rightarrow 2} 3x^3 - x^2 - x - 1 & .2 = \lim_{x \rightarrow 1} (x+1)(2x^2 - 2x - 1) & .3 = \lim_{x \rightarrow 3} \frac{x-4}{5x^2 - 2x + 3} \\ .4 = \lim_{x \rightarrow 64} \frac{x-64}{8-\sqrt{x}} & .5 = \lim_{x \rightarrow (-2)} \frac{-2-x}{1-\sqrt{x+3}} & .6 = \lim_{x \rightarrow 3} \sqrt{2-x} \\ .7 = \lim_{x \rightarrow 2} |x+3| & .8 = \lim_{x \rightarrow 2} \frac{x-2}{|x-2|} & .9 = \lim_{x \rightarrow 3+} \frac{-3+x}{|x^2 + 2x - 15|} \\ .10 = \lim_{x \rightarrow 0-} \frac{5}{x} - \frac{5}{|x|} & .11 = \lim_{x \rightarrow (2/3)} \frac{|3x-2|}{3x^2 + 10x - 8} & \end{array} \right],$$

$$No02 = \left[ \left[ \begin{array}{l} f(x) = x + 2, g(x) = \begin{cases} \frac{3x}{|x|} & x \neq 0 \\ 3 & x = 0 \end{cases} \\ \begin{array}{lll} .3.1 = \lim_{x \rightarrow 0^+} f(x) + g(x) & .3.2 = \lim_{x \rightarrow 0^-} f(x) - g(x) & .3.3 = \lim_{x \rightarrow 0^+} f(x) g(x) \\ .3.4 = \lim_{x \rightarrow 0^-} \frac{f(x)}{g(x)} & .3.5 = \lim_{x \rightarrow 0} f(x) g(x) & \text{Math@MUT} \end{array} \end{array} \right] \right]$$

$$No3 = \left[ \left[ \left[ \begin{array}{ccc} f(x) = \text{ceil}(x) & & \\ .1 = \lim_{x \rightarrow 2^-} f(x) & .2 = \lim_{x \rightarrow 2^+} f(x) & .3 = \lim_{x \rightarrow 2} f(x) \\ .4 = \lim_{x \rightarrow (-2.8)^-} f(x) & .5 = \lim_{x \rightarrow (-2.8)^+} f(x) & .6 = \lim_{x \rightarrow (-2.8)} f(x) \end{array} \right] \right] \right]$$

[illegible]



$$No01 = \left[ \begin{array}{ccc} .1 = \lim_{x \rightarrow 1} 5x^3 + x^2 + 2x - 2 & .2 = \lim_{x \rightarrow 3} (x^3 - 2x^2)(x + 1) & .3 = \lim_{x \rightarrow 4} \frac{x - 4}{5x^2 - 4x - 4} \\ .4 = \lim_{x \rightarrow 100} \frac{10 - \sqrt{x}}{x - 100} & .5 = \lim_{x \rightarrow 4} \frac{4 - x}{3 - \sqrt{x + 5}} & .6 = \lim_{x \rightarrow 1} \sqrt{2 - x} \\ .7 = \lim_{x \rightarrow (-3)} |x + 1| & .8 = \lim_{x \rightarrow 1} \frac{|x - 1|}{1 - x} & .9 = \lim_{x \rightarrow 4-} \frac{|x^2 - 16|}{x - 4} \\ .10 = \lim_{x \rightarrow 0-} \frac{4}{x} + \frac{4}{|x|} & .11 = \lim_{x \rightarrow (1/4)} \frac{|4x - 1|}{12x^2 - 23x + 5} & \end{array} \right],$$

$$No03 = \left[ \begin{array}{c} f(x) = \text{floor}(x) \\ \left[ \begin{array}{ccc} .1 = \lim_{x \rightarrow 3^-} f(x) & .2 = \lim_{x \rightarrow 3^+} f(x) & .3 = \lim_{x \rightarrow 3} f(x) \\ .4 = \lim_{x \rightarrow (-1.7)^-} f(x) & .5 = \lim_{x \rightarrow (-1.7)^+} f(x) & .6 = \lim_{x \rightarrow (-1.7)} f(x) \end{array} \right] \end{array} \right]$$

[illegible]





[illegible]

$$No0I = \left[ \begin{array}{lll} .1 = \lim_{x \rightarrow 3} x^3 - 2x^2 + 2 & .2 = \lim_{x \rightarrow 1} (4x + 1)(2x^3 - 2x^2 + 4) & .3 = \lim_{x \rightarrow 2} \frac{x^2 - 3x - 3}{4x^2 + 4x - 1} \\ .4 = \lim_{x \rightarrow 100} \frac{x - 100}{\sqrt{x} - 10} & .5 = \lim_{x \rightarrow (-1)} \frac{2 - \sqrt{x + 5}}{-1 - x} & .6 = \lim_{x \rightarrow 2} \sqrt{x - 1} \\ .7 = \lim_{x \rightarrow (-2)} |x - 1| & .8 = \lim_{x \rightarrow 2} \frac{|x - 2|}{x - 2} & .9 = \lim_{x \rightarrow 4} \frac{|x^2 - 2x - 8|}{x - 4} \\ .10 = \lim_{x \rightarrow 0-} \frac{4}{x} + \frac{4}{|x|} & .11 = \lim_{x \rightarrow (2/3)} \frac{|3x - 2|}{15x^2 - 7x - 2} & \end{array} \right],$$

$$No02 = \left[ \left[ \left[ \begin{array}{c} f(x) = 4x + 2, g(x) = \begin{cases} \frac{4|x|}{x} & x \neq 0 \\ 4 & x = 0 \end{cases} \\ \end{array} \right] \left[ \begin{array}{ccc} .3.1 = \lim_{x \rightarrow 0^-} f(x) + g(x) & .3.2 = \lim_{x \rightarrow 0^+} f(x) - g(x) & .3.3 = \lim_{x \rightarrow 0^+} f(x) g(x) \\ .3.4 = \lim_{x \rightarrow 0^-} \frac{f(x)}{g(x)} & .3.5 = \lim_{x \rightarrow 0} f(x) g(x) & Math@MUT \end{array} \right] \right] \right]$$

$$No03 = \left[ \begin{array}{c} f(x) = \text{ceil}(x) \\ \left[ \begin{array}{ccc} .1 = \lim_{x \rightarrow 4-} f(x) & .2 = \lim_{x \rightarrow 4+} f(x) & .3 = \lim_{x \rightarrow 4} f(x) \\ .4 = \lim_{x \rightarrow (-4.2)-} f(x) & .5 = \lim_{x \rightarrow (-4.2)+} f(x) & .6 = \lim_{x \rightarrow (-4.2)} f(x) \end{array} \right] \end{array} \right]$$

[illegible]

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 Limit03 for No.646124

$$No01 = \left[ \begin{array}{lll} .1 = \lim_{x \rightarrow 3} 3x^3 + 3x^2 + 3x & .2 = \lim_{x \rightarrow 3} (5x^3 + 4x - 3)(x + 4) & .3 = \lim_{x \rightarrow 4} \frac{4x^2 - 3x - 4}{4x - 3} \\ .4 = \lim_{x \rightarrow 16} \frac{4 - \sqrt{x}}{x - 16} & .5 = \lim_{x \rightarrow 24} \frac{5 - \sqrt{x + 1}}{24 - x} & .6 = \lim_{x \rightarrow 3} \sqrt{3 - x} \\ .7 = \lim_{x \rightarrow 1} |x - 1| & .8 = \lim_{x \rightarrow 2} \frac{|x - 2|}{2 - x} & .9 = \lim_{x \rightarrow 1-} \frac{|x^2 - 6x + 5|}{x - 1} \\ .10 = \lim_{x \rightarrow 0+} \frac{5}{|x|} - \frac{5}{x} & .11 = \lim_{x \rightarrow (4/5)} \frac{5x^2 + 6x - 8}{|5x - 4|} & \text{Math@MUT} \end{array} \right], \quad \left[ \begin{array}{l} \left[ \begin{array}{c} P \\ V \\ S \\ S \end{array} \right] \\ \& \\ \left[ \begin{array}{c} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{array} \right] \end{array} \right]$$

$$No02 = \left[ \left[ \begin{array}{l} \left[ \begin{array}{l} f(x) = 4x + 5, g(x) = \begin{cases} \frac{4x}{|x|} & x \neq 0 \\ 4 & x = 0 \end{cases} \\ \begin{array}{lll} .3.1 = \lim_{x \rightarrow 0^-} f(x) + g(x) & .3.2 = \lim_{x \rightarrow 0^-} f(x) - g(x) & .3.3 = \lim_{x \rightarrow 0^+} f(x) g(x) \\ .3.4 = \lim_{x \rightarrow 0^+} \frac{f(x)}{g(x)} & .3.5 = \lim_{x \rightarrow 0} f(x) g(x) & \text{Math@MUT} \end{array} \end{array} \right] \right] \right]$$

$$No03 = \left[ \left[ \left[ \begin{array}{ccc} f(x) = \text{ceil}(x) & & \\ .1 = \lim_{x \rightarrow 3-} f(x) & .2 = \lim_{x \rightarrow 3+} f(x) & .3 = \lim_{x \rightarrow 3} f(x) \\ .4 = \lim_{x \rightarrow (-2.6)-} f(x) & .5 = \lim_{x \rightarrow (-2.6)+} f(x) & .6 = \lim_{x \rightarrow (-2.6)} f(x) \end{array} \right] \right] \right]$$

[illegible]

$$No01 = \left[ \begin{array}{ccc} .1 = \lim_{x \rightarrow 1} x^3 - 4x^2 + 2x - 2 & .2 = \lim_{x \rightarrow 3} (4x^2 - 2x + 3)(3x^2 + 2x - 4) & .3 = \lim_{x \rightarrow 3} \frac{5x^3 + 3x + 1}{x + 3} \\ .4 = \lim_{x \rightarrow 16} \frac{\sqrt{x} - 4}{x - 16} & .5 = \lim_{x \rightarrow 24} \frac{5 - \sqrt{x + 1}}{x - 24} & .6 = \lim_{x \rightarrow 1} \sqrt{-3 + x} \\ .7 = \lim_{x \rightarrow (-2)} |-3 + x| & .8 = \lim_{x \rightarrow 3} \frac{|-3 + x|}{3 - x} & .9 = \lim_{x \rightarrow 1-} \frac{|x^2 - 1|}{x - 1} \\ .10 = \lim_{x \rightarrow 0-} \frac{5}{x} - \frac{5}{|x|} & .11 = \lim_{x \rightarrow (5/3)} \frac{3x^2 - 11x + 10}{|3x - 5|} & Math@MUT \end{array} \right],$$

$$\left[ \begin{array}{c} \left[ \begin{array}{c} P \\ V \\ S \\ S \end{array} \right] \\ \& \\ \left[ \begin{array}{c} M \\ a \\ t \\ h \\ @ \\ M \\ U \\ T \end{array} \right] \end{array} \right]$$



[illegible]

$$No0I = \left[ \begin{array}{lll} .1 = \lim_{x \rightarrow 1} 4x^2 + 2 & .2 = \lim_{x \rightarrow 3} (3x^3 - x^2 + 4)(2x + 2) & .3 = \lim_{x \rightarrow 1} \frac{2x^3 - 4x^2 + 2x}{5x - 2} \\ .4 = \lim_{x \rightarrow 64} \frac{8 - \sqrt{x}}{64 - x} & .5 = \lim_{x \rightarrow 27} \frac{\sqrt{x - 2} - 5}{27 - x} & .6 = \lim_{x \rightarrow 3} \sqrt{2 - x} \\ .7 = \lim_{x \rightarrow (-1)} |x + 2| & .8 = \lim_{x \rightarrow 3} \frac{-3 + x}{|-3 + x|} & .9 = \lim_{x \rightarrow 4} \frac{|x^2 - 9x + 20|}{x - 4} \\ .10 = \lim_{x \rightarrow 0^-} \frac{1}{|x|} - \frac{1}{x} & .11 = \lim_{x \rightarrow (5/3)} \frac{|3x - 5|}{3x^2 - 17x + 20} & \end{array} \right],$$

$$No02 = \left[ \left[ \left[ f(x) = \begin{cases} \frac{2x}{|x|} & x \neq 0 \\ 2 & x = 0 \end{cases}, g(x) = 5x + 2 \right] \right. \right. \\ \left. \left. \begin{array}{lll} .3.1 = \lim_{x \rightarrow 0^-} f(x) + g(x) & .3.2 = \lim_{x \rightarrow 0^-} f(x) - g(x) & .3.3 = \lim_{x \rightarrow 0^+} f(x) g(x) \\ .3.4 = \lim_{x \rightarrow 0^+} \frac{f(x)}{g(x)} & .3.5 = \lim_{x \rightarrow 0} f(x) + g(x) & Math@MUT \end{array} \right] \right]$$

$$No03 = \left[ \left[ \left[ \begin{array}{ccc} f(x) = \text{ceil}(x) & & \\ .1 = \lim_{x \rightarrow 3-} f(x) & .2 = \lim_{x \rightarrow 3+} f(x) & .3 = \lim_{x \rightarrow 3} f(x) \\ .4 = \lim_{x \rightarrow (-5.1)-} f(x) & .5 = \lim_{x \rightarrow (-5.1)+} f(x) & .6 = \lim_{x \rightarrow (-5.1)} f(x) \end{array} \right] \right] \right]$$

[illegible]



[illegible]

$$No01 = \left[ \begin{array}{lll} .1 = \lim_{x \rightarrow 2} 3x^2 + 3x - 1 & .2 = \lim_{x \rightarrow 2} (4x^3 + x^2 - 3x)(2x + 3) & .3 = \lim_{x \rightarrow 2} \frac{x - 4}{5x - 4} \\ .4 = \lim_{x \rightarrow 100} \frac{100 - x}{10 - \sqrt{x}} & .5 = \lim_{x \rightarrow 4} \frac{x - 4}{3 - \sqrt{x + 5}} & .6 = \lim_{x \rightarrow 1} \sqrt{x - 2} \\ .7 = \lim_{x \rightarrow 2} |x + 3| & .8 = \lim_{x \rightarrow 3} \frac{-3 + x}{|-3 + x|} & .9 = \lim_{x \rightarrow 3+} \frac{-3 + x}{|x^2 - 7x + 12|} \\ .10 = \lim_{x \rightarrow 0+} \frac{3}{x} - \frac{3}{|x|} & .11 = \lim_{x \rightarrow (5/3)} \frac{|3x - 5|}{15x^2 - 31x + 10} & \end{array} \right],$$

$$No02 = \left[ \left[ \begin{array}{l} f(x) = 5x + 2, g(x) = \begin{cases} 3\lfloor x \rfloor & x \neq 0 \\ x & x = 0 \end{cases} \\ \begin{array}{lll} .3.1 = \lim_{x \rightarrow 0^-} f(x) + g(x) & .3.2 = \lim_{x \rightarrow 0^+} f(x) - g(x) & .3.3 = \lim_{x \rightarrow 0^+} f(x) g(x) \\ .3.4 = \lim_{x \rightarrow 0^-} \frac{f(x)}{g(x)} & .3.5 = \lim_{x \rightarrow 0} \frac{f(x)}{g(x)} & \text{Math@MUT} \end{array} \end{array} \right] \right]$$

$$No03 = \left[ \left[ \left[ \begin{array}{ccc} f(x) = \text{ceil}(x) & & \\ .1 = \lim_{x \rightarrow 5^-} f(x) & .2 = \lim_{x \rightarrow 5^+} f(x) & .3 = \lim_{x \rightarrow 5} f(x) \\ .4 = \lim_{x \rightarrow (-4.2)^-} f(x) & .5 = \lim_{x \rightarrow (-4.2)^+} f(x) & .6 = \lim_{x \rightarrow (-4.2)} f(x) \end{array} \right] \right] \right]$$

[illegible]



[illegible]