



មេរៀនទី០១

លីមីតនៃអនុគមន៍ (មេរៀនសង្ខេប និង លំហាត់)

សម្រាប់ឆ្នាំសិក្សា: ២០១៧-២០១៨

រៀបរៀងដោយ:

ស៊ី សំអុន

២០៩៦៩៤០៥៨៤០

♥ ប្រធានលំហាត់ ♥

នា

1. គណនាលីមីតនៃអនុគមន៍ពីជគណិតខាងក្រោម៖

ក. $\lim_{x \rightarrow 1} \frac{x^2 - 2x + 1}{x^3 - x}$

ខ. $\lim_{x \rightarrow 0} \frac{x^2 - 3x + 2}{x^2 - 4}$

គ. $\lim_{x \rightarrow 3} \frac{x^2 - 5x + 6}{x - 3}$

ឃ. $\lim_{x \rightarrow 1} \frac{x^3 - 1}{x^3 + 4x - 5}$

ង. $\lim_{x \rightarrow 1} \frac{1 - x^2}{x^2 + 2x - 3}$

ច. $\lim_{x \rightarrow 1} \frac{x^3 + 3x + 4}{x + 1}$

ឆ. $\lim_{x \rightarrow 1} \frac{1 - x^2}{x^3 - x^2 + x - 1}$

ជ. $\lim_{x \rightarrow 1} (3x^2 - 4x)$

ឈ. $\lim_{x \rightarrow 1} \frac{x^2 - 1}{x^2 - 3x + 2}$

2. គណនាលីមីតនៃអនុគមន៍ពីជគណិតខាងក្រោម៖

ក. $\lim_{x \rightarrow 2} \frac{\sqrt{x+2} - 2}{x^2 - 4}$

ខ. $\lim_{x \rightarrow 3} \frac{\sqrt{x+6} - 3}{x^3 - 27}$

គ. $\lim_{x \rightarrow 1} \frac{\sqrt{3x+1} - 2}{x^3 - 1}$

ឃ. $\lim_{x \rightarrow 0} \frac{\sqrt[3]{1+3x^2} - 1}{x^2}$

ង. $\lim_{x \rightarrow 2} \frac{\sqrt[3]{x-3} + 1}{x + 2}$

ច. $\lim_{h \rightarrow 0} \frac{\sqrt[3]{x+h} - \sqrt[3]{x}}{h}$

3. គណនាលីមីតនៃអនុគមន៍ពីជគណិតខាងក្រោម៖

ក. $\lim_{x \rightarrow 1} \frac{\sqrt{x} + \sqrt{x+3} - 3}{x - 1}$

ខ. $\lim_{x \rightarrow 0} \frac{\sqrt{x+1} + \sqrt[3]{x-1}}{x}$

គ. $\lim_{x \rightarrow 2} \frac{\sqrt[3]{x-1} - \sqrt{x-1}}{x - 2}$

4. កំណត់តម្លៃនៃចំនួនថេរ a ដើម្បីឲ្យលីមីតខាងក្រោមជាលីមីតចំនួនថេរ៖

ក. $\lim_{x \rightarrow 1} \frac{\sqrt{x+3} - a}{x - 1}$

ខ. $\lim_{x \rightarrow 2} \frac{\sqrt{x+a} - 1}{x - 2}$

គ. $\lim_{x \rightarrow 0} \frac{\sqrt{x^2 + ax} - 1}{x^2 - 1}$

5. កំណត់តម្លៃនៃចំនួនពិត a និង b ដើម្បីឲ្យចំនួនទាំងពីរបំពេញលក្ខខណ្ឌលីមីត៖

ក. $\lim_{x \rightarrow 2} \frac{x^2 + ax + 2}{x - 2} = b$

ខ. $\lim_{x \rightarrow -1} \frac{x^2 + ax + b}{x + 1} = -3$

6. គណនាលីមីតនៃអនុគមន៍ពីជគណិតខាងក្រោម៖

ក. $\lim_{x \rightarrow \infty} \frac{x^2 - 5x}{x^2 - 3x + 1}$

ខ. $\lim_{x \rightarrow \infty} \frac{x^3 + 1}{x^4 - x^2 + 1}$

គ. $\lim_{x \rightarrow +\infty} \frac{1 + x - 3x^3}{1 + x^2 + 3x^3}$

ឃ. $\lim_{x \rightarrow \infty} \frac{(x^2 + 2)(2x^3 + 3)}{x^5 + 1}$

ង. $\lim_{x \rightarrow +\infty} \frac{x^5 + (x+5)^5}{x^5 + 5}$

ច. $\lim_{x \rightarrow +\infty} \frac{\sqrt{x} + \sqrt[3]{x} + \sqrt[4]{x}}{\sqrt{x+1}}$

7. គណនាលីមីតនៃអនុគមន៍ពីជគណិតខាងក្រោម៖

ក. $\lim_{x \rightarrow 0} \frac{\sqrt{x+3} - \sqrt{3}}{x}$

ខ. $\lim_{x \rightarrow 2} \frac{x-2}{\sqrt{x^2-2} - \sqrt{2}}$

គ. $\lim_{x \rightarrow 1} \frac{\sqrt{x^2+3} - \sqrt{x+3}}{x-1}$

ឃ. $\lim_{x \rightarrow 4} \frac{x^2 - 16}{\sqrt{x} - 2}$

ង. $\lim_{x \rightarrow 2} \frac{x^3 - 8}{\sqrt{2x+5} - \sqrt{x+3}}$

ច. $\lim_{x \rightarrow 0} \frac{\sqrt{x^2+1} - 1}{x}$

ឆ. $\lim_{x \rightarrow 1} \frac{\sqrt[3]{x} + \sqrt{x} - 2}{x-1}$

ជ. $\lim_{x \rightarrow 1} \frac{x+5\sqrt{x}-6}{x-4\sqrt{x}+3}$

ឈ. $\lim_{x \rightarrow 3} \frac{\sqrt{x+6} - 3}{x^3 - 27}$

8. គណនាលីមីតនៃអនុគមន៍ពីជគណិតខាងក្រោម៖

ក. $\lim_{x \rightarrow 1} \left(\frac{1}{1-x} - \frac{3}{1-x^3} \right)$

ខ. $\lim_{x \rightarrow 1} \frac{x+x^2+x^3-3}{x-1}$

គ. $\lim_{x \rightarrow 1} \frac{x^p - 1}{x^n - 1}$

ឃ. $\lim_{x \rightarrow 1} \frac{x^{2018} - 1}{x^{2017} - 1}$

ង. $\lim_{x \rightarrow a} \frac{x^n - a^n}{x - a}$

ច. $\lim_{x \rightarrow 2} \frac{x^5 - 32}{x - 2}$

ជ. $\lim_{x \rightarrow 1} \frac{x+x^2+x^3+\dots+x^{2017}-2017}{x-1}$

ឈ. $\lim_{x \rightarrow 1} \frac{x+x^2+x^3+\dots+x^n-n}{x+x^2+x^3+\dots+x^m-m}$

9. គណនាលីមីតនៃអនុគមន៍ពីជគណិតខាងក្រោម៖

ក. $\lim_{x \rightarrow +\infty} (\sqrt{x^2+1} - x)$

ខ. $\lim_{x \rightarrow -\infty} (\sqrt{x^2+x} - x)$

គ. $\lim_{x \rightarrow +\infty} (\sqrt{x+\sqrt{x}} - \sqrt{x})$

ឃ. $\lim_{x \rightarrow +\infty} (\sqrt{x^2+3x} - \sqrt{x^2+1})$

ង. $\lim_{x \rightarrow +\infty} (x - \sqrt{x^2+3x+4})$

ច. $\lim_{x \rightarrow -\infty} (\sqrt{x^2-x+1} - \sqrt{x^2+x+1})$

ជ. $\lim_{x \rightarrow \pm\infty} (\sqrt{x^2-2x-1} - \sqrt{x^2+3x+1})$

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