

Department of Mathematical Sciences
KFUPM
Term 051

**MATH 101/ Quiz#1/ Duration=25 minutes
Code 001**

Name:

ID#:

1 [2.5 Marks]

$\lim_{x \rightarrow -\infty} (2x^2 - 3x + 5)(\sqrt{x^4 + 9} - \sqrt{x^4 + 4})$ is equal to :

- a) $-\infty$ b) -1 c) $-1/2$ d) 0 e) $1/2$ f) 1 g) 5 h) $+\infty$.

2 [2.5 Marks]

$\lim_{x \rightarrow 0} \frac{x}{\sqrt{x+9} - 3}$ is equal to :

- a) $-\infty$ b) -1 c) -6 d) -3 e) 0 f) 3 g) 6 h) $+\infty$.

3 [5 Marks]

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

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**MATH 101/ Quiz#1/ Duration=25 minutes
Code 002**

Name:

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1 [2.5 Marks]

$\lim_{x \rightarrow -\infty} (x^2 - 2x - 3)(\sqrt{x^6 + 7} - \sqrt{x^6 + 5})$ is equal to :

a) $-\infty$ b) -1 c) $-1/2$ d) 0 e) $1/2$ f) 1 g) 2 h) $+\infty$.

2 [2.5 Marks]

$\lim_{x \rightarrow 0} \frac{x}{\sqrt{4-x}-2}$ is equal to :

a) $-\infty$ b) -1 c) -4 d) -2 e) 0 f) 2 g) 4 h) $+\infty$.

3 [5 Marks]

Find $\lim_{x \rightarrow 2} \frac{x^3 - 8}{x^2 - 5x + 6}$.

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**MATH 101/ Quiz#1/ Duration=25 minutes
Code 003**

Name:

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1 [2.5 Marks]

$\lim_{x \rightarrow -\infty} (x^3 + x^2 + 7)(\sqrt{4x^6 + 8} - \sqrt{4x^6 + 4})$ is equal to :

a) $-\infty$ b) -1 c) $-1/2$ d) 0 e) $1/2$ f) 1 g) 4 h) $+\infty$.

2 [2.5 Marks]

$\lim_{x \rightarrow 0} \frac{x}{\sqrt{x+16} - 4}$ is equal to :

a) $-\infty$ b) -8 c) -4 d) -2 e) 0 f) 4 g) 8 h) $+\infty$.

3 [5 Marks]

Find $\lim_{x \rightarrow 3} \frac{x^3 - 27}{x^2 - 4x + 3}$.

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**MATH 101/ Quiz#1/ Duration=25 minutes
Code 004**

Name:

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1 [2.5 Marks]

$\lim_{x \rightarrow -\infty} (3x^4 + 2x^3 + 1)(\sqrt{9x^8 + 9} - \sqrt{9x^8 + 5})$ is equal to :

- a) $-\infty$ b) -4 c) $-3/2$ d) 0 e) $3/2$ f) 2 g) 4 h) $+\infty$.

2 [2.5 Marks]

$\lim_{x \rightarrow 0} \frac{x}{\sqrt{5x + 25} - 5}$ is equal to :

- a) $-\infty$ b) -10 c) -5 d) -2 e) 0 f) 2 g) 5 h) $+\infty$.

3 [5 Marks]

Find $\lim_{x \rightarrow -3} \frac{x^3 + 27}{x^2 + x - 6}$.