

**King Fahd University of Petroleum and Minerals**

**Math 101**

**Quiz # 2(a)**

**Time: 20 minutes**

**Date: 26-2-2015**

Name	ID #	Sr #	Sec. 13	Marks:
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Q1. Use Intermediate Value Theorem to prove that the equation  $\cos x = x$  has a solution.

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

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**Quiz # 2(b)**

**Time: 20 minutes**

**Date: 26-2-2015**

Name	ID #	Sr #	Sec. 13	Marks:
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Q1. Use Intermediate Value Theorem to prove that the equation  $x^4 + x - 3 = 0$  has a solution.

Q2. Find the horizontal asymptotes of the graph of the function  $f(x) = \frac{\sqrt{2x^2+1}}{3x-5}$ .

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**Quiz # 2(c)**

**Time: 20 minutes**

**Date: 26-2-2015**

Name	ID #	Sr #	Sec. 12	Marks:
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Q1. Use Intermediate Value Theorem to prove that the equation  $\sqrt[3]{x} = 1 - x$  has a root.

Q2. Find the vertical asymptotes of the graph of the function  $f(x) = \frac{\sqrt{2x^2+1}}{3x-5}$ .

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**Quiz # 2(d)**

**Time: 20 minutes**

**Date: 26-2-2015**

Name	ID #	Sr #	Sec. 12	Marks:
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Q1. Use Intermediate Value Theorem to prove that the equation  $x^2 - \cos \pi x = 4$  has a root.

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

