Student ID	Index No.



MANAGEMENT DEVELOPMENT INSTITUTE OF SINGAPORE IN TASHKENT

Course : Foundation

Module Title : Mathematics

Module Leader : Mr Tan Chee Kian

Assessment : Assignment 1

Due Date : 27 March 2020

Weighting within Module : 10%

Instructions:

1. This paper consists of **FIVE** (5) pages including this cover page.

2. Answer **ALL** questions.

3. Write legibly in the spaces provided in the question paper.

- 4. Unless stated otherwise, all answers are to be corrected to **one** (1) **decimal place**.
- 5. The **Total Marks** of this assignment are **50**.

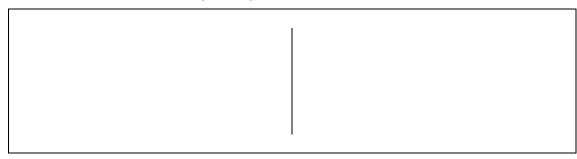
Question	Marks
1	
2	
3	
TOTAL	

Answer ALL questions [Total: 50 marks]

Question 1 [20 marks]

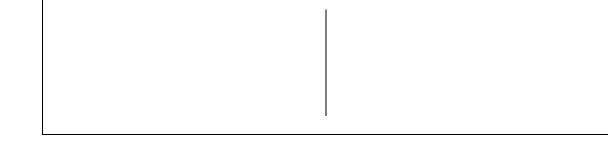
(a) Evaluate $(4x-2)(3x+2)-(2x-3)^2$.

[4 marks]



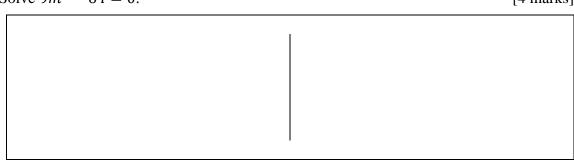
(b) Solve $4x^2 - 4x - 15 = 0$.

[4 marks]



(c) Solve $9m^2 - 64 = 0$.

[4 marks]



(d) Simplify the expression, giving the answer in simplest terms:

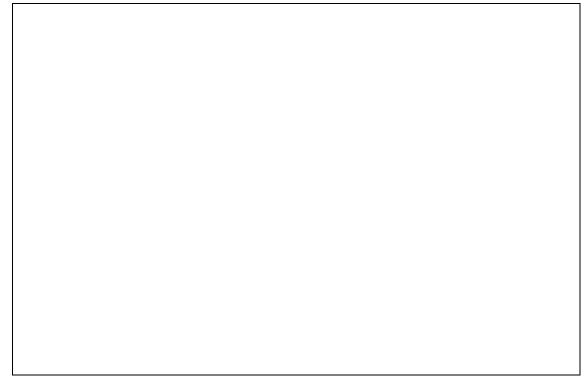
$$\frac{2x^2 - x - 10}{3x^2 - 16x - 12} \div \frac{x^2 - 4}{15x^2 - x - 6}$$

[8 marks]

Question 2 [20 marks]

Given that $\mathbf{A} = \begin{bmatrix} 4 & 0 & 7 \\ 2 & 1 & 0 \\ 5 & 0 & 6 \end{bmatrix}$ and $\mathbf{B} = \begin{bmatrix} -3 & 7 & -5 \\ 5 & 9 & 2 \\ 4 & -6 & 3 \end{bmatrix}$.

(a)	Find $3A + 2B$.	[6 marks]



(b) Find $A \times B$. [6 marks]



Find A^{-1} .	[8 mar

Question 3 [10 marks]

3x - 2y + 5z = 30	
2x + 5y - 3z = 1	
5x - 3y - 4z = -11	