



Centre for Preparatory Studies (CPS)

Math Unit

Math Level 1 (FPM 101A)

Midterm Exam “**Model paper**”

Term 1 Fall, 2024-25

Student Name							
Student ID							Date: 15/10/2024
Section							Duration: 1 hour 15 minutes
Instructor/s	Tareq Mufleh, Wesam Tawfiq						

General Instructions

- Place your DU ID card on your desk throughout the examination period.
- Read the task instructions carefully.
- Use only a blue or black pen. (Pencil is allowed only for writing tasks)
- Not allowed to use programmable calculators and/or smart-watches/phones or any other smart devices inside the exam hall.
- Must abide by DU’s Academic Integrity Policy (AIP)- Policy No. DU-AC-007



Dhofar University’s Academic Integrity Policy (AIP) is intended to foster hard work, honesty, and responsibility. It strictly prohibits all forms of academic misconduct, including cheating and collusion, plagiarism, and impersonation. By signing below, I agree to abide by the AIP.

تهدف سياسة النزاهة الأكاديمية بجامعة ظفار إلى تعزيز العمل الجاد والأمانة والمسؤولية و تحظر تمامًا جميع الأشكال التي تخالف النزاهة الأكاديمية، بما في ذلك الغش والتواطؤ والسرقة الأدبية والانتحال. بالتوقيع أدناه ، أوافق على الالتزام بسياسة النزاهة الأكاديمية.

Signature of the student _____

Marking Grid					
Question 1		8	Question 3		7
Question 2		6	Question 4		9
Total					30

Marked by: _____	Moderated/ Checked by: _____
Signature: _____ Date: _____	Signature: _____ Date: _____

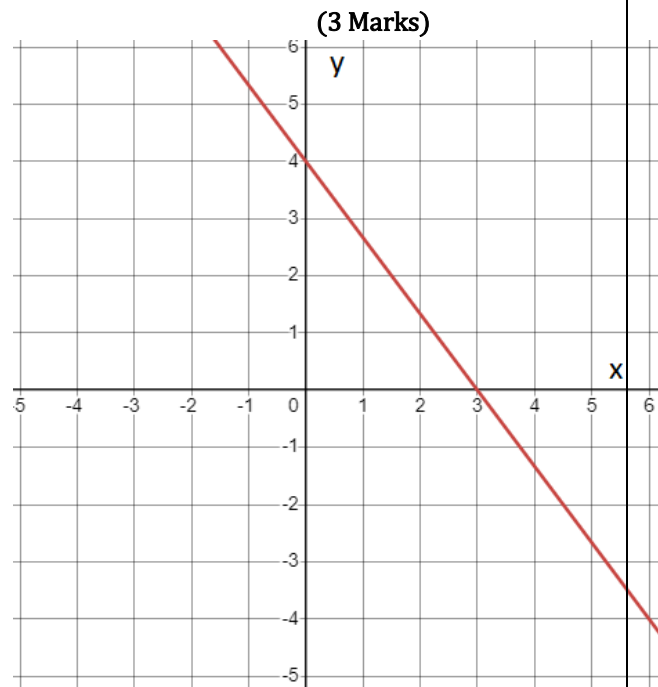
Question 1: MULTIPLE CHOICE. Circle the correct answer.**(8 Marks)**

1.	The slope of a line that is parallel to the line $y = 10x + 20$ is: a) -10 b) 10 c) 20 d) -20
2.	Equation of the line that passes through the point $(0, 5)$ and has a slope of 2 is: a) $y = -5x + 2$ b) $y = 2x + 5$ c) $y = 2x - 5$ d) $y = 5$
3.	Slope of the line passing through $(0, 0)$ and $(5, 20)$ is: a) 20 b) 5 c) -4 d) 4
4.	The slope of a line that is perpendicular to the line $y = -\frac{1}{4}x + 7$ is: a) $-\frac{1}{4}$ b) $\frac{1}{4}$ c) 4 d) -4
5.	Slope of the horizontal line is: a) 0 b) 1 c) Undefined d) -1
6.	Simplify: $\left(\frac{2^{-2}}{2^{-3}}\right)$ a) 2 b) $\frac{1}{2}$ c) 4 d) <i>not of these</i>
7.	Simplify: $-(3^{-4})^0$ a) 3^4 b) 1 c) -1 d) x^{12}
8.	Simplify: $5^2 \cdot 5^{-2}$ a) 0 b) 5 c) $\frac{1}{5}$ d) 1

Question 2: (6 Marks)

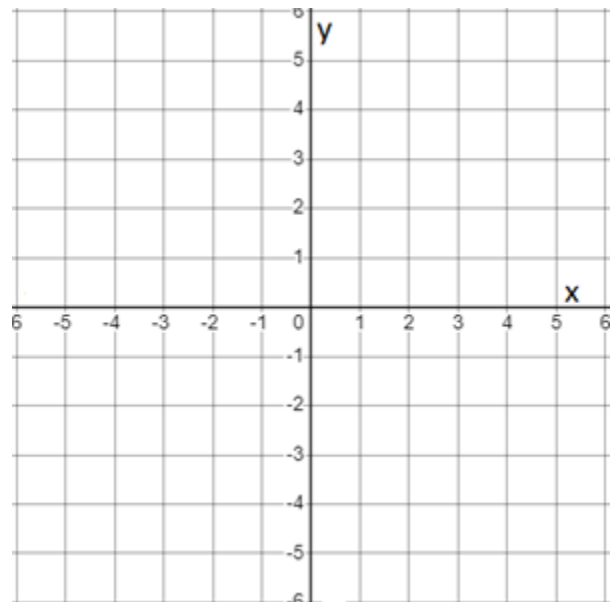
a) From the given graph find:

1. x – intercept:
2. y – intercept:
3. Slope $m =$



b) Graph the system of linear inequalities and find the solution area. (3 Marks)

$$\begin{cases} 5x \leq 5 \\ y - 1 > 2 \end{cases}$$



Question 3: (7 Marks)

a) Find equation of straight line passing through (4, 9) with slope 7.

(3 Marks)

b) Find equation of straight line passing through (2, 5) and parallel to $y = 5x + 3$.

(4 Marks)

Question 4: (9 Marks)

Simplify the following with positive exponents:

a) $(x^{-7}y)(x^3y^3) =$ (3 Marks)

b) $\frac{8x^{-7}y^4}{2x^{-2}y^{-2}} =$ (3 Marks)

c) Rationalize the denominator: (3 Marks)

$$\frac{3}{\sqrt{x}-3}$$

End of Midterm Exam – Model Paper

SCRATCH SHEET

Name: _____

Note:

1. This scratch sheet will not be marked.
2. Do not detach it from the rest of exam papers.