

Name		Class	
Duration	80 Mins	Period	
Score	/ 100	Date	Nov 5, 2025

This Exam contains on two parts. First MCQ (20-Questions), and second part FRQ (6 Questions).

Q1: Choose the Correct Answer Letter and write it in the below table (MCQs).

Question	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
Answer	B	C	D	B	A	B	D	A	C	B
Question	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.
Answer	A	D	C	A	D	C	D	B	A	D

1. The quotient of 24 and x equals 14 minus 2 times x. (3 Marks) *

A. $\frac{24}{x} = (14 - 2)x$

B. $\frac{24}{x} = 14 - 2x$

C. $\frac{x}{24} = 14 - 2x$

D. $\frac{x}{24} = (14 - 2)x$

2. Solve the equation. (3 Marks) *

$$\frac{c}{4} = -\frac{9}{8}$$

A. $c = -3.5$

B. $c = 3.5$

C. $c = -4.5$

D. $c = 4.5$

3. Solve the equation. (3 Marks) *

$$7(n - 2) + 8 = 3(n - 4) - 2$$

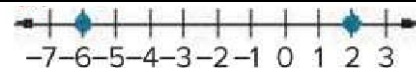
A. $n = 2$

B. $n = -9$

C. $n = -5$

D. $n = -2$

4. Write an equation involving absolute value for the graph? (3 Marks)



A. $|x| = 6$

B. $|x + 2| = 4$

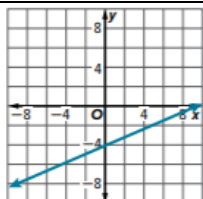
C. $|x - 4| = 2$

D. $|x| = 3$

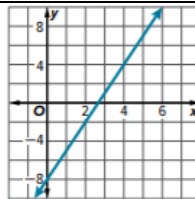
5. State the graph of the function (3 Marks) *

$$y + 4 = \frac{3}{7}x$$

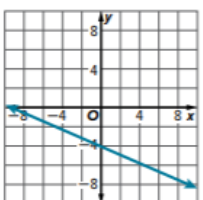
A.



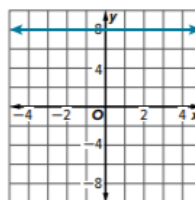
B.



C.



D.



6. Write the equation in slope intercept form (3 Marks) *

$$-10x + 2y = 12$$

A. $y = 5x - 6$

B. $y = 5x + 6$

C. $y = 3x + 2$

D. $y = -3x - 2$

7. Describe the transformation of $g(x) = (x - 2) - 8$ as it relates to the graph of the parent function, $f(x) = x$ (3 Marks) *

A. Translation 8 units right and 2 units down

B. Translation 2 units right and 8 units up

C. Translation 8 units right and 2 units up

D. Translation 2 units right and 8 units down

8. Find the value of r so the line that passing through $(12, 10)$ and $(-2, r)$ has a slope of -4 ? (3 Marks) *

A. 66

B. -66

C. 33

D. -33

9. Write an equation in slope-intercept form for the line that passes through $(-4, 2)$ and is perpendicular to the graph of equation $y = -\frac{1}{2}x + 6$. (3 Marks) *

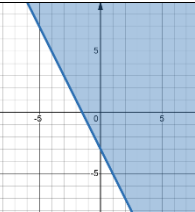
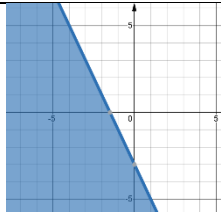
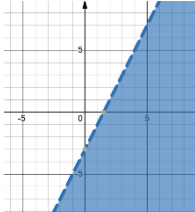
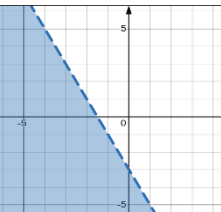
A. $y = -\frac{1}{2}x$

B. $y = -\frac{1}{2}x + 6$

C. $y = 2x + 10$

D. $y = -2x + 10$

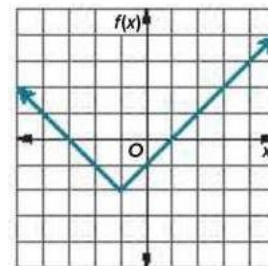
10. Select the solution set for $13 > 18 + r$. (3 Marks) *	
A. $\{r r > -5\}$	B. $\{r r < -5\}$
C. $\{r r > 5\}$	D. $\{r r < 5\}$
11. Find the inverse function of $C(x) = 24x + 38$. (3 Marks) *	
A. $C^{-1}(x) = \frac{1}{24}x - \frac{19}{12}$	B. $C^{-1}(x) = \frac{1}{24}x + \frac{19}{12}$
C. $C^{-1}(x) = -\frac{1}{24}x - \frac{19}{12}$	D. $C^{-1}(x) = 24x - \frac{19}{12}$
12. Write the equation of the line that passes through $(-4, -2), (4, 0)$? (3 Marks) *	
A. $y = \frac{1}{4}x + 1$	B. $y = -\frac{1}{4}x - 1$
C. $y = \frac{1}{2}x - 1$	D. $y = \frac{1}{4}x - 1$
13. Translate the sentence into inequality . (3 Marks) * A number is divided by eight minus thirteen is greater than negative six.	
A. $\frac{x}{8} - 13 < -6$	B. $\frac{x}{13} - 8 < -6$
C. $\frac{x}{8} - 13 > -6$	D. $\frac{x}{8} - 13 \geq -6$
14. Solve the equation. (3 Marks) * $ 4x - 2 = 26$. (3 Marks) *	
A. $\{-6, 7\}$	B. $\{-6, -7\}$
C. $\{6, 7\}$	D. $\{6, -7\}$
15. Write the inequality that represents the following graph (3 Marks) *	
	
A. $n \geq 5$	B. $n > 5$
C. $n \leq 5$	D. $n < 5$
16. Solve the following inequality (3 Marks) * $ 2c - 1 \leq 7$	
A. $\{c 3 \leq c \leq 4\}$	B. $\{c c \leq -3 \text{ or } c \geq 4\}$
C. $\{c -3 \leq c \leq 4\}$	D. $\{c -1 \leq c \leq 2\}$

17. Suppose $f(x) = 2\llbracket x - 1 \rrbracket$, find $f(-1.25)$ (3 Marks) *	
A. -4.5	B. -3
C. -5	D. -6
18. Determine whether the line that passes through $(-6, -2)$ and $(2, 10)$ is parallel, perpendicular, or neither to the line that has the equation $3x - 2y = 10$ (3 Marks) *	
A. Perpendicular	B. Parallel
C. Neither	D. Perpendicular and Neither
19. Find the inverse function of $f(x) = 6(x + 7)$ (3 Marks) *	
A. $f^{-1}(x) = \frac{1}{6}x - 7$	B. $f^{-1}(x) = \frac{1}{7}x - 6$
C. $f^{-1}(x) = \frac{1}{6}x + 7$	D. $f^{-1}(x) = \frac{1}{7}x + 6$
20. Select the graph that represents the following inequality . (3 Marks) *	
$2x + y < -3$	
A. 	B. 
C. 	D. 

Part Two (FRQ)- 6 Questions (40 Marks)

Q2: Use graph of the function to write its equation (6 Marks)

$$f(x) = |x + 1| - 2$$



Q3: Solve each equation and state whether the equation has one solution, no solution, or is an identity. (8 Marks)*

a) $-6y - 3 = 3 - 6y$

Ans: $-6y + 6y = 3 + 3$

$0 \neq 6$

No Solution

b) $8q + 12 = 4(3 + 2q)$

Ans: $8q + 12 = 12 + 8q$

$8q - 8q = 12 - 12$

$0 = 0$

Identity

Q4: Suppose regular gasoline costs \$2.76 per gallon. You can purchase a car wash at the gas station for \$3 .

1. Write equation in slope intercept form for the total cost of purchasing a car wash and x gallons of gasoline. (3 Marks)

$$y = 2.76x + 3$$

2. Find the cost of purchasing a car wash and 8 gallons of gasoline. (3 Marks)

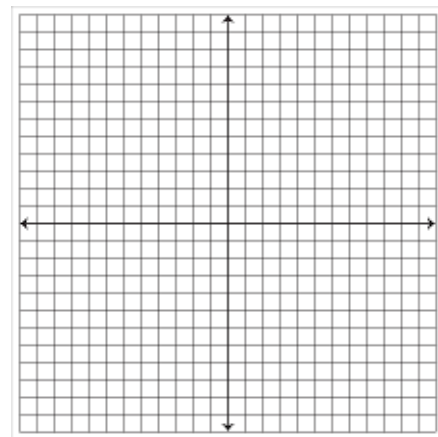
$$y = \$25.08$$

Q5: Graph the following equation by using x- and y-intercepts? (6 Marks)*

$$x = 5y + 5$$

$$x - \text{int } (5, 0)$$

$$y - \text{int } (0, -1)$$



Q6: Solve the following inequality. Then graph the solution set? (7 Marks)*

$$2(x - 4) \leq 2 + 3(x - 6).$$

$$\{x \mid x \geq 8\}$$

Q7: Determine whether the graphs of the following lines are parallel, perpendicular, or neither? **Justify your Answer.** (7 Marks)*

$$-3x + 4y = 8$$

$$-4x + 3y = -6$$

Answer: neither