

MTH 05, Test 2, V. 2b, 10/23/18

Luis Fernández

NAME: _____

There are twenty-two questions, each worth 5 points. For multiple-choice questions, circle your answer. For free-response questions, SHOW ALL WORK to receive credit.

1. What is the slope-intercept form of the equation $5x - 4y = 20$?

(a) $y = \frac{3}{2}x + 3$

(b) $y = 5x + 24$

(c) $y = \frac{5}{4}x - 5$

(d) $y = \frac{4}{5}x + 4$

2. Use the formula $F = \frac{9}{5}C + 32$ to find F when $C = 15$.

(a) 37

(b) -4

(c) 81.2

(d) 59

3. What is the slope of the line connecting the points $(4, 10)$ and $(6, 3)$?

(a) 4

(b) $\frac{13}{10}$

(c) $\frac{1}{4}$

(d) $-\frac{7}{2}$

4. Find x -intercept and y -intercept for the graph of the equation $2x - 7y = 14$.

(a) x -intercept: $(7, 0)$ and y -intercept: $(0, -2)$

(b) x -intercept: $(-7, 0)$ and y -intercept: $(0, 2)$

(c) x -intercept: $(0, 0)$ and y -intercept: $(2, 7)$

(d) x -intercept: $(-14, 2)$ and y -intercept: $(7, 14)$

5. Solve for t in the expression $A = rt - 3$.

(a) $t = \frac{A+3}{r}$

(b) $t = Ar + 3$

(c) $t = \frac{r}{A} + 3$

(d) $t = 3$

6. The area A of a trapezoid is given by the formula $A = \frac{B+b}{2} \cdot h$. If $A = 90$, $B = 6$, and $b = 3$, what is the value of h ?

(a) $\frac{99}{2}$

(b) 20

(c) -53

(d) 18

7. Solve for t in the equation $P = \frac{t}{4} + a$.

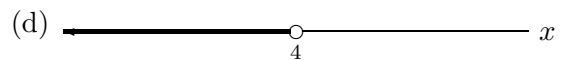
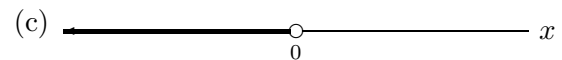
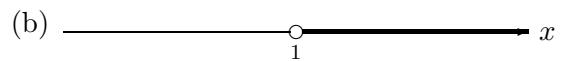
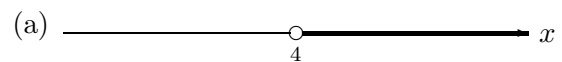
(a) $t = \frac{P-4a}{2}$

(b) $t = 4a + P$

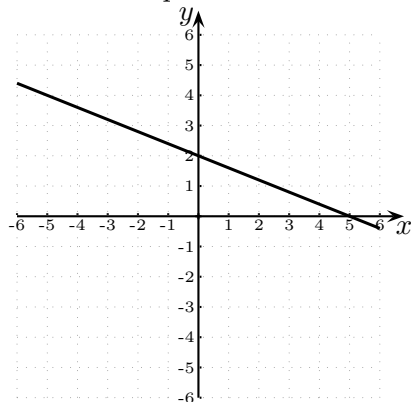
(c) $t = 4(P-a)$

(d) $t = \frac{P-a}{4}$

8. Pick the graph of the solution to the inequality $10x - 10 > 6x + 6$.



9. Choose the equation of the line in the graph.



- (a) $5x - y = 2$
- (b) $y = 2$
- (c) $2x + 5y = 10$
- (d) $5x - 2y = 10$

10. Find the slope and y -intercept for the graph of the equation $3x + 7y = 28$.

- (a) Slope = $\frac{3}{7}$ and y -intercept: $(4, 0)$
- (b) Slope = $\frac{3}{7}$ and y -intercept: $(0, -4)$
- (c) Slope = $-\frac{3}{7}$ and y -intercept: $(0, 28)$
- (d) Slope = $-\frac{3}{7}$ and y -intercept: $(0, 4)$

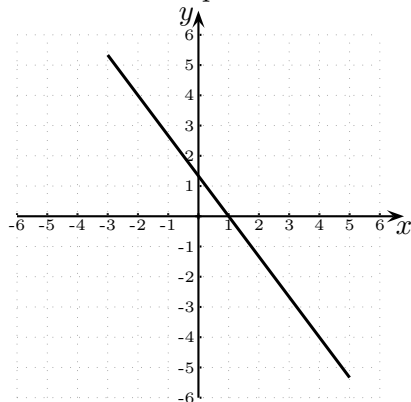
11. Solve: $\frac{3x}{7} \leq \frac{15}{14}$

- (a) $x \leq \frac{5}{2}$
- (b) $x < \frac{2}{5}$
- (c) $x = 5$
- (d) $x \geq \frac{5}{2}$

12. Find the equation of the horizontal line passing through the point $(-3, -4)$.

- (a) $y = \frac{3}{4}x$
- (b) $x = -3$
- (c) $y = \frac{4}{3}x$
- (d) $y = -4$

13. What is the slope of the line in the graph?



- (a) $\frac{4}{3}$
- (b) $-\frac{3}{4}$
- (c) $-\frac{4}{3}$
- (d) $\frac{3}{4}$

14. Which equation's graph is parallel to that of $y = 3x - 14$?

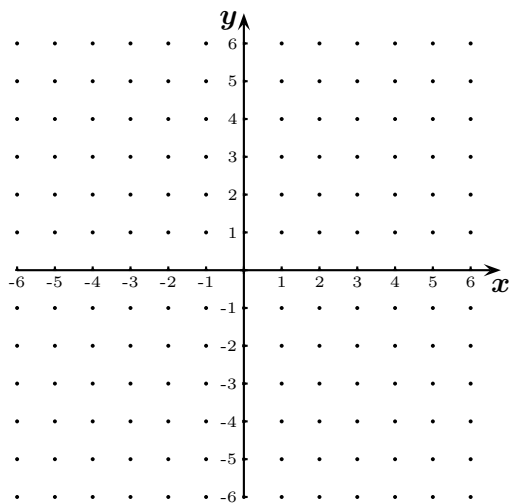
- (a) $y = \frac{1}{3}x + 7$
- (b) $y = -3x + 8$
- (c) $y = -\frac{1}{3}x - 11$
- (d) $y = 3x + 12$

_____Free response questions start here. SHOW ALL WORK!!!_____

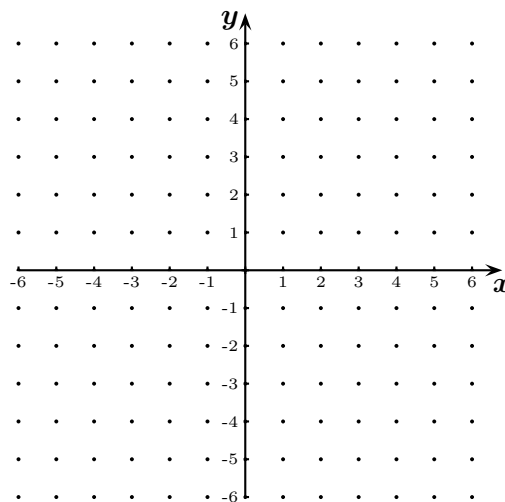
15. Find an equation for the line passing through the points $(2, 5)$ and $(-2, 7)$.

16. Find the slope and y -intercept of the line with equation $2x + 5y = 15$.

17. Graph the equation $x = 3$ indicating at least two points.



18. Graph $y = -\frac{3}{5}x + 2$ indicating at least two points.



19. Find the equation of the line passing through the point $(5, -2)$ and perpendicular to the line $-2x + 5y = 1$.

20. Solve and graph the solution on the number line: $3 - 5(2x + 5) \geq 2(x + 4) - 7x$.

21. Solve the following system of equations. If there is no unique solution, say whether the system has *no solutions* or *infinitely many solutions*.

$$\begin{cases} 3x + 2y = 10 \\ 5x - 3y = 4 \end{cases}$$

22. Graph $5x - 3y = 15$ indicating at least two points.

