

Trig Chapter 4 Practice Test 2

Name _____

Solve each system by either substitution or elimination.

1.
$$\begin{cases} y = x + 4 \\ 2y + x = 23 \end{cases}$$

2.
$$\begin{cases} y - x = 1 \\ y + 3x = 13 \end{cases}$$

3.
$$\begin{cases} y = x + 4 \\ y = 2x - 1 \end{cases}$$

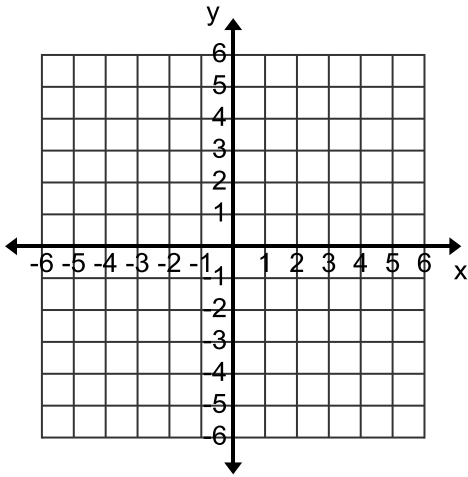
4.
$$\begin{cases} 5n + 4b = 1 \\ 2n + 2b = 0 \end{cases}$$

5.
$$\begin{cases} 3n + 2b = 0 \\ 2n + 5b = -11 \end{cases}$$

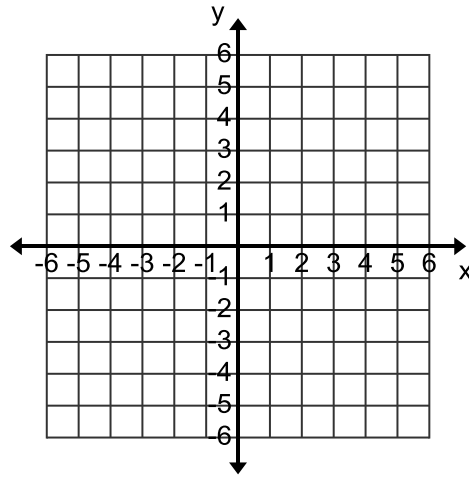
6.
$$\begin{cases} 5n + 2b = 24 \\ 3n + 5b = 22 \end{cases}$$

Graph the following on the given graphs.

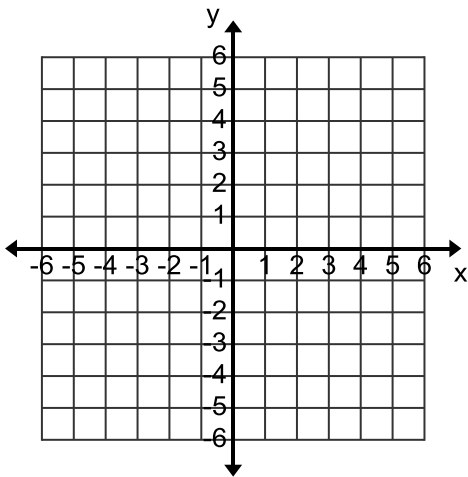
7.
$$\begin{cases} y > -2x + 1 \\ y \leq \frac{1}{3}x + 2 \end{cases}$$



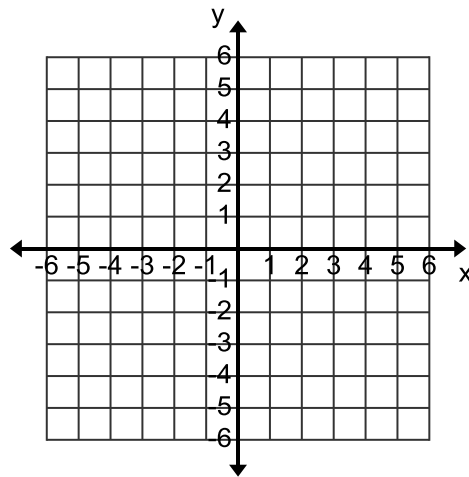
8.
$$\begin{cases} y > x + 1 \\ y > -3x + 1 \end{cases}$$



9.
$$\begin{cases} y \leq \frac{1}{3}x + 1 \\ y \leq 3 \\ y \geq 1 \end{cases}$$



10.
$$\begin{cases} y > -2 \\ y < 3 \\ x > -1 \\ y > 2x + 1 \end{cases}$$



$$A = [5 \ 4 \ 1] \quad B = \begin{bmatrix} 3 \\ 5 \\ -4 \end{bmatrix} \quad C = \begin{bmatrix} 4 & 4 \\ -1 & 2 \end{bmatrix} \quad D = \begin{bmatrix} 4 & 1 & 8 \\ 4 & 6 & 5 \\ 1 & 2 & 1 \end{bmatrix}$$
$$E = \begin{bmatrix} 2 & 5 \\ 1 & -1 \end{bmatrix} \quad F = \begin{bmatrix} 1 & 0 \\ 1 & 2 \end{bmatrix} \quad G = \begin{bmatrix} 2 & 1 \\ -1 & 2 \end{bmatrix}$$

Calculate the following.

11. $E + C$

12. $3D$

13. EE

14. $\det(C)$

15. $\det(E)$

16. C^{-1}

17. F^{-1}

18. AB

19. FG

Show the matrix multiplication equation for each and then use your calculator to solve each. If you don't have a calculator at home, think through what you would do; however, you still can write the matrix multiplication equation.

20. $4x + y = 15$
 $2x - y = -3$

21. $2n + b = 8$
 $4n + 5b = 22$

22. $2x + 2y - 2z = 8$
 $x - y + 2z = 0$
 $3x + 4y + 2z = 27$

23. $2n + 4y + z = 10$
 $2n + 2y + 2z = 20$
 $2n - 2y - 2z = -20$

24. If matrix A is a 4 by 4 matrix, what would $A \cdot A^{-1}$ equal?