Comprehensive Review #8

Topics:
Lesson 62 - Abstract Coefficients
Lesson 69 - Determinants
Lesson 74 - Cramer's Rule

1. Solve for x: $\begin{cases} zx + wy = v \\ ux + ty = s \end{cases}$

2. Solve for y: $\begin{cases} tx + sy = r \\ qx + py = n \end{cases}$

Solve:

3. $\begin{cases} 4x + y = -6 \\ 3x - y = -1 \end{cases}$ [A] $(0, -6)$ [B] no solution   [C] $(-10, -2)$ [D] $(-1, -2)$

4. $\begin{cases} 2x + 4y = 30 \\ 3x - 4y = -5 \end{cases}$ [A] $(40, 5)$ [B] $(5, 5)$ [C] no solution   [D] $\left(0, \dfrac{15}{2}\right)$

5. Solve for x: $\begin{vmatrix} x-13 & -19 \\ 2 & x \end{vmatrix} = -4$

6. Solve for x: $\begin{vmatrix} x+12 & -7 \\ 5 & x \end{vmatrix} = -1$

7. Solve for x: $\begin{vmatrix} x-16 & -31 \\ 2 & x \end{vmatrix} = -1$ [A] $7, 9$ [B] $-7, -9$ [C] $-5, -6$ [D] $5, 6$

8. Solve for x: $\begin{vmatrix} x+1 & 14 \\ 2 & x \end{vmatrix} = -8$ [A] $-6, 8$ [B] $4, -5$ [C] $-4, 5$ [D] $6, -8$

9. Use Cramer's rule to solve for y: $\begin{cases} 4x + 3y = -3 \\ 4x - y = 4 \end{cases}$

Use Cramer's rule to solve for x:

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

11. $\begin{cases} 2x + 4y = 3 \\ 2x + 5y = 11 \end{cases}$ [A] 8 [B] 14 [C] $\dfrac{59}{2}$ [D] $-\dfrac{29}{2}$

12. Use Cramer's rule to solve for y: $\begin{cases} 5x - y = -1 \\ 3x - 3y = -2 \end{cases}$

    [A] $\dfrac{7}{12}$ [B] $-\dfrac{1}{12}$ [C] $-\dfrac{5}{12}$ [D] $\dfrac{13}{12}$