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Set: A

1. $\delta(x) = \begin{cases} 3 & 0 < x < 2 \\ 0 & x > 2 \end{cases}$

sine transform $F(\omega) = \sqrt{\frac{2}{\pi}} \frac{3}{\omega}(1 - \cos 2\omega)$

2. $\begin{vmatrix} 4 & -1 & 2 \\ 0 & 2 & -5 \\ 0 & -8 & 5 \end{vmatrix}$ ~~Ref~~ $= \begin{bmatrix} 4 & -1 & 2 \\ 0 & -8 & 5 \\ 0 & 0 & -15/4 \end{bmatrix}$

rank = 3

3. $\begin{bmatrix} 3x - 2y = -1 \\ -6x + 4y = 2 \end{bmatrix}$ its inconsistent because of formula

4. $h_k = 0.6\,\delta[1-1]\, e^{i\frac{2\pi n}{N}} - 2\delta[3-3]\, e^{i\frac{6\pi n}{N}}$

5. $f(x) = 9x3$

odd, $a_0 = 0$

6. $\left[\begin{array}{ccc|c} 1 & 1 & 6 & 6 \\ & 1 & \lambda & 4 \\ & & \lambda+3 & \lambda \end{array}\right]$ $\lambda \neq -3$

7. $f(t) = \begin{cases} e^{2t} & t > 0 \\ 1 & \\ 0 & t < 0 \end{cases}$

odd, $A(w) = 0$

8. $\left[\begin{array}{ccc|c} 1 & 2 & -3 & 4 \\ -2 & 1 & 1 & -3 \\ 4 & -2 & -2 & 7 \end{array}\right]$ = No solution

because right side one value

9. $2(-18) - 0 + 3(-12) = +36 - 36 = 0$

10. odd