Algebra 3 Assignment # 2

Systems of Equations

Solve each of the following systems please.

(1)
$$\begin{aligned} x - 2y &= 0 \\ 2x + 5z &= -7 \\ x + y + z &= 3 \end{aligned}$$

(2)
$$\begin{aligned} x + y + z &= 6 \\ 2x - y + z &= 3 \\ 3x + y + z &= 8 \end{aligned}$$

(3)
$$\begin{aligned} x + 2y - z &= 6 \\ x - y + 2z &= 0 \\ 2x + 3y + z &= 6 \end{aligned}$$

(4)
$$\begin{aligned} 3x + y + 2z &= 1 \\ 2x - y + 4z &= -3 \\ 5x + 2y + 6z &= 4 \end{aligned}$$

(5)
$$\begin{aligned} -6x + 5y - 5z &= 0 \\ -3x - 6y + 4z &= 47 \\ 2x + y - 3z &= -20 \end{aligned}$$

(6) Find the values of the constants a, b, and c if the function $y = ax^2 + bx + c$ is to pass through the points $(1, -6)$, $(2, -3)$ and $(3, 4)$.

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Answers

(1) $(4 , 2 , -3)$

(2) $(1, 2 , 3)$

(3) $(4 , 0 , -2)$

(4) $\left(-1 , 3 , \frac{1}{2} \right)$

(5) $(-5 , -4 , 2)$

(6) $a = 2 , b = -3 , c = -5$