1-1

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determine whether the equation is linear in x_1 x_2 and x_3

1 b)

$x_1 + 3x_2 + x_1x_3 = 2$

f)

$\pi x_1 - \sqrt{2}x_2 = 7^{1/3}$

Find the augmented matrix

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$$\begin{aligned} -2x_1 &= 6 \\ 3x_1 &= 8 \\ 9x_1 &= -3 \end{aligned}$$

Describe the equations to describe solution of set of linear equation

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$a) 7x - 5y = 3$
$b) x_1 + 3x_2 - 12x_3 = 3$
$c) -8x_1 + 2x_2 - 5x_3 + 6x_4 = 1$
$d) 3v - 8w + 2x - y + 4z = 0$

Each has infinte solutions; use a parametric equation to describe the solution set.

15 a)

$$2x - 3y = 1$$
$$6x - 9y = 3$$

b)

$$x_1 + 3x_2 - x_3 = -4$$
$$3x_1 + 9x_2 - 3x_3 = -12$$
$$-x_1 - 3x_2 + x_3 = 4$$