

MATH 1314

Chapter 9.2: Systems of Linear Equations in Three Variables and Applications

DETERMINE IF THE ORDERED TRIPLE IS A SOLUTION TO THE SYSTEM.

$$2x + y - 3z = -2$$

$$x - 4y + z = 24$$

$$-3x - y + 4z = 0$$

$$(3, -5, 1)$$

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

Solve.

$$3x - 2y + z = 2$$

$$5x + y - 2z = 1$$

$$4x - 3y + 3z = 7$$

Solve.

$$-x + 6y - 3z = -8$$

$$x - 2y + 2z = 3$$

$$3x + 2y + 4z = 6$$

Solve.

$$2x + y = -3$$

$$2y + 16z = -10$$

$$-7x - 3y + 4z = 8$$

LOUISE NEEDS 30 L OF A 12% ACID SOLUTION. SHE HAS SOLUTIONS OF 10% ACID, 15% ACID, AND 5% ACID. IF SHE USES FOUR TIMES AS MUCH OF THE 15% SOLUTION AS THE 5% SOLUTION, DETERMINE HOW MUCH OF EACH SOLUTION SHE USES.