

u = 0

$$\begin{cases} 25x + 10y + 5z = 45 \\ x + y + z = 9 \end{cases} \Rightarrow \begin{cases} 5x + 2y + z = 9 \\ x + y + z = 9 \end{cases}$$

$$\begin{cases} 2y + z = 9 - 5x \\ y + z = 9 - x \end{cases} \Rightarrow \begin{cases} y = -4x \\ z = 9 + 3x \end{cases}$$

$$\begin{cases} x = 0 \\ y = 0 \\ \boxed{z = 9} \\ u = 0 \end{cases} \text{ Answer}$$

~~$$\begin{cases} x = 1 \\ y = -4 \\ z = 12 \\ u = 0 \end{cases}$$~~ 1 solution

Case 2: u = 5

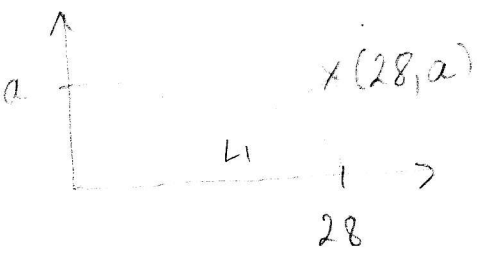
$$\begin{cases} 25x + 10y + 5z + 5 = 45 \\ x + y + z + 5 = 9 \end{cases} \Rightarrow \begin{cases} 25x + 10y + 5z = 40 \\ x + y + z = 4 \end{cases}$$

$$\begin{cases} 5x + 2y + z = 8 \\ x + y + z = 4 \end{cases} \Rightarrow \begin{cases} y = 4 - 4x \\ z = 3x \end{cases}$$

$$\begin{cases} x = 0 \\ y = 4 \\ z = 0 \\ u = 5 \end{cases} \quad \begin{cases} x = 1 \\ y = 0 \\ z = 3 \\ u = 5 \end{cases} \quad \text{2 solutions}$$

Answer: E

Problem 5



m = a/28

L1: y = a/28 x

a) (28, 14)

y = 14/28 x => y = 1/2 x

x = 2 => y = 1 (NO)

b) (28, 16)

y = 16/28 x => y = 4/7 x