NO.

DATE

$-\frac{11}{5}-\frac{10}{5}$ $-\frac{2}{5}+\frac{5}{5}$

1

(1) $\begin{pmatrix} \frac{4}{5} & \frac{3}{5} \\ -\frac{3}{5} & \frac{4}{5} \end{pmatrix}\begin{pmatrix} 1 \\ -2 \end{pmatrix}+\begin{pmatrix} 1 \\ -2 \end{pmatrix}=\begin{pmatrix} \frac{4}{5}-\frac{6}{5} \\ -\frac{3}{5}-\frac{8}{5} \end{pmatrix}+\begin{pmatrix} 1 \\ -2 \end{pmatrix}$

$=\begin{pmatrix} \frac{3}{5} \\ -\frac{21}{5} \end{pmatrix}$

(2) $\begin{pmatrix} \frac{4}{5} & \frac{3}{5} \\ -\frac{3}{5} & \frac{4}{5} \end{pmatrix}\begin{pmatrix} x_1 \\ x_2 \end{pmatrix}+\begin{pmatrix} 1 \\ -2 \end{pmatrix}=\begin{pmatrix} 2 \\ 3 \end{pmatrix}$

$\frac{4}{5}x_1+\frac{3}{5}x_2+1=2$

$-\frac{3}{5}x_1+\frac{4}{5}x_2-2=3$

$\times 5$

$4x_1+3x_2+5=20 \cdots ① \times 3$

$-3x_1+4x_2-10=15 \cdots ② \times 4$

$+$

$25x_2-25=90$

$25x_2=115$

$x_2=\frac{23}{5}$

$\frac{4}{5}x_1+\frac{69}{25}+1=2$

$x_1=-\frac{4}{5}$

$\vec{X}=\begin{pmatrix} -\frac{11}{5} \\ \frac{23}{5} \end{pmatrix}$

(3) $\begin{pmatrix} a \\ b \end{pmatrix}=\begin{pmatrix} \frac{4}{5} & \frac{3}{5} \\ -\frac{3}{5} & \frac{4}{5} \end{pmatrix}\begin{pmatrix} a \\ b \end{pmatrix}+\begin{pmatrix} 1 \\ -2 \end{pmatrix}$

$=$

$\frac{4}{5}a+\frac{3}{5}b+1=a$

$-\frac{3}{5}a+\frac{4}{5}b-2=b$