Home Instruction: What is a Matrix? Matrix-EQ Form   April 6, 2020   Period____

Fill in the missing coefficients or matrix entries. Missing values are marked with capital letters.

1) $\begin{bmatrix} 2 & 5 \end{bmatrix}$ represents Ax + 5y

2) $\begin{bmatrix} 7 & A & 35 \end{bmatrix}$ represents Bx - 17y + Cz

3) Ax - By is represented by $\begin{bmatrix} 4 & -12 \end{bmatrix}$
   A = ____, B = ____

4) 3x + B y + Cz is represented by
   $\begin{bmatrix} A & 6 & -14 \end{bmatrix}$

5) -2(Ax + 6y - 4z) can be
   represented by $-2\begin{bmatrix} 4 & B & C \end{bmatrix}$

   A = ____, B = ____, C = ____

6) $\begin{bmatrix} -2 & 3 \\ 5 & -7 \\ C & D \end{bmatrix} = \begin{bmatrix} -2 & A \\ B & -7 \\ -9 & 12 \end{bmatrix}$

   A = ___, B = ___, C = ___, D = ___

7) $\begin{bmatrix} 3 & 6 & -2 \\ 4 & 3 & 6 \\ -1 & 8 & 12 \end{bmatrix} = \begin{bmatrix} A & 6 & B \\ 4 & C & 6 \\ D & 8 & E \end{bmatrix}$

   A = ____, B = ____, C = ____, D = ____,
   E = ____

8) $\begin{bmatrix} -3 & A & 22 \\ D & -4 & -28 \end{bmatrix} = \begin{bmatrix} B & 4 & C \\ 6 & E & F \end{bmatrix}$

   A = ____, B = ____, C = ____, D = ____,
   E = ____, F = ____

9) $\begin{bmatrix} A & 2 \\ 3 & -B \end{bmatrix} = \begin{bmatrix} \dfrac{1}{2} & 2 \\ C & -5 \end{bmatrix}$

   A = ____, B = ____, C = ____

10) $\begin{bmatrix} A & 2 & 4 & -7 \\ 7 & E & -4 & F \\ 0 & 5 & H & -8 \end{bmatrix} = \begin{bmatrix} 1 & 2 & B & C \\ D & -2 & -4 & -1 \\ G & 5 & 6 & -8 \end{bmatrix}$

   A = ____, B = ____, C = ____, D = ____,
   E = ____, F = ____, G = ____, H = ____