

6) Continued

12/01/22 ACMA ~~ACOG~~  
2111290

Page 4 of 12

$$|A_2| = \begin{pmatrix} 5 & 32 & 2 \\ 1 & 10 & 1 \\ 2 & 13 & 2 \end{pmatrix}$$

$$|A_2| = 5(10 \times 2 - 13 \times 1) - 32(1 \times 2 - 2 \times 1) \\ + \cancel{2(10 \times 13 - 2 \times 10)} + 2(1 \times 13 - 2 \times 10)$$

$$|A_2| = 35 - 0 - 14$$

$$|A_2| = 21$$

$$|A_3| = \begin{pmatrix} 5 & 1 & 32 \\ 1 & -1 & 10 \\ 2 & 5 & 13 \end{pmatrix}$$

$$|A_3| = 5((-1 \times 13) - 5 \times 10) - 1(1 \times 13 - 2 \times 10) \\ + 32(1 \times 5 - (2 \times -1))$$

$$|A_3| = -315 + 7 + 224$$

$$|A_3| = -84$$