

## Chapter 3

### Section 3.3

#### Section 3.3.2

Quiz 86: True

Quiz 87: False

Quiz 88: False

Quiz 89: True

Quiz 90: False

Quiz 91: False

Quiz 92: False

Quiz 93: True

#### Section 3.3.3

Exercise 3.1: -39

Exercise 3.3: 3

Exercise 3.5: 184

Exercise 3.7: -32

Exercise 3.9: 39

Exercise 3.11: -3

Exercise 3.13: -184

Exercise 3.15: 32

Exercise 3.20:

1.  $-(a \cdot d - b \cdot c)$

2.  $k \cdot (a \cdot d - b \cdot c)$

3.  $(a \cdot d - b \cdot c)$

4.  $(a \cdot d - b \cdot c)$

Exercise 3.20:  $k^2 \cdot (a \cdot d - b \cdot c)$

## Section 3.4

### Section 3.4.5

- Quiz 94: True
- Quiz 95: False
- Quiz 96: False
- Quiz 97: True
- Quiz 98: False
- Quiz 99: True
- Quiz 100: True
- Quiz 101: True
- Quiz 102: True
- Quiz 103: True
- Quiz 104: True
- Quiz 105: 2
- Quiz 106: 2
- Quiz 107: 1
- Quiz 108: 2
- Quiz 109: 1
- Quiz 110: 3

### Section 3.4.6

Exercise 3.37:

$$\begin{bmatrix} 1 & -2 & 1 \\ 0 & 1 & 0 \\ 0 & 0 & 1 \end{bmatrix} \cdot \begin{bmatrix} 1 & 0 & 0 \\ 0 & 1 & 9 \\ 0 & 0 & 1 \end{bmatrix} \cdot \begin{bmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & -1/39 \end{bmatrix} \cdot \begin{bmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 5 & 1 \end{bmatrix} \cdot \begin{bmatrix} 1 & 0 & 0 \\ 0 & 1 & -1 \\ 0 & 0 & 1 \end{bmatrix} \cdot \begin{bmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ -1 & 0 & 1 \end{bmatrix}$$

Exercise 3.39:

$$\begin{bmatrix} -1/3 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & 1 \end{bmatrix} \cdot \begin{bmatrix} 1 & 0 & 0 \\ 0 & 1 & 9 \\ 0 & 0 & 1 \end{bmatrix} \cdot \begin{bmatrix} 1 & 0 & 0 \\ 1 & 1 & 0 \\ 0 & 0 & -1/39 \end{bmatrix} \cdot \begin{bmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ -1 & 0 & 1 \end{bmatrix} \cdot \begin{bmatrix} 1 & 0 & 0 \\ 0 & 1/2 & 0 \\ 0 & 0 & 1 \end{bmatrix} \\ \cdot \begin{bmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & -1 & 1 \end{bmatrix} \cdot \begin{bmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & -2 \end{bmatrix} \cdot \begin{bmatrix} 1 & 0 & 1 \\ 0 & 1 & 0 \\ 0 & 0 & 1 \end{bmatrix} \cdot \begin{bmatrix} 1 & 0 & 0 \\ 0 & 1 & 1/2 \\ 0 & 0 & 1 \end{bmatrix}$$

Exercise 3.43:

1.  $2 \cdot (-2)$
2.  $2^3$
3.  $2 \cdot 2$
4.  $2 \cdot 2$
5. 2

Exercise 3.51:  $k^n \cdot \det(A)$ , where  $n$  is the rank of  $A$ .

## **Section 3.5**

### **Section 3.5.5**

Quiz 111: False

Quiz 112: True

Quiz 96: True

Quiz 114: True

Quiz 115: True