

Even answers to Homework “To finish by April 21”

Chapter 2.4:

8. Both products are 3×3

10. AB is 4×6 , BA is undefined

12. AB is undefined, BA is 2×3

24:

$$\begin{pmatrix} 14 & 18 \\ 7 & 14 \end{pmatrix}$$

30:

$$\begin{pmatrix} 22 & -8 \\ 11 & 3 \end{pmatrix}$$

50: a) The rows represent the meal (B, L or D) and the columns represent the amount of fat, carbohydrates or proteins consumed. Therefore the $XY_{1,1} = 20$ represents the amount of fats consumed at breakfast, $XY_{2,3} = 35$ represents the amount of proteins consumed at lunch, etc...

$$XY = \begin{pmatrix} 20 & 52 & 27 \\ 25 & 62 & 35 \\ 30 & 72 & 43 \end{pmatrix}$$

b) This matrix represents the number of calories from each food group per unit, therefore you consume 75 calories per ounce of meat, 45 calories per $1/2$ cup of vegetables, 70 calories per slice of bread and 168 calories per 8 oz. of milk.

$$YZ = \begin{pmatrix} 75 \\ 45 \\ 70 \\ 168 \end{pmatrix}$$

c) The entries tell you how many calories you consume per meal, 503 for breakfast, 623 for lunch and 743 for dinner.

$$XYZ = \begin{pmatrix} 503 \\ 623 \\ 743 \end{pmatrix}$$

Chapter 2.5:

22: This matrix has no inverse.

Extra problems:

1: a) 50%, 16% b) 50%, 2%

2: a) ~ 5.77 mg b) 4