


## Solving linear equations using the inverse matrix

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Practice Assignment • 30 min

 English ▾

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1. You go to the shops on Monday and buy 1 apple, 1 banana, and 1 carrot; the whole transaction totals €15. On Tuesday you buy 3 apples, 2 bananas, 1 carrot, all for €28. Then on Wednesday 2 apples, 1 banana, 2 carrots, for €23.

Construct a matrix and vector for this linear algebra system. That is, for

$$A \begin{bmatrix} a \\ b \\ c \end{bmatrix} = \begin{bmatrix} s_{\text{Mon}} \\ s_{\text{Tue}} \\ s_{\text{Wed}} \end{bmatrix}$$

Where  $a, b, c$ , are the prices of apples, bananas, and carrots. And each  $s$  is the total for that day.Fill in the components of  $A$  and  $s$ .

```

1  # Replace A and s with the correct values below:
2  A = [[1,1,1],
3       [3,2,1],
4       [2,1,2]]
5
6  s = [15,28,23]
7
```

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 **Correct**

Correct! Well done.

2. Given another system,  $B\mathbf{r} = \mathbf{t}$ ,

1 / 1 point

$$\textcircled{1} : \begin{bmatrix} 4 & 6 & 2 \\ 2 & 1 & 1 \end{bmatrix} \begin{bmatrix} a \\ b \end{bmatrix} = \begin{bmatrix} 9 \\ 7 \end{bmatrix}$$