

Name : \_\_\_\_\_

# Matrix Multiplication

## Word Problems

- 1 A tea stall sells both black tea and green tea. In 2 hours the number of cups sold is shown in the table below.

	Small Cup	Large Cup
Black tea	3	4
Green tea	6	3

Represent the above table by a matrix S. If a matrix  $P = \begin{bmatrix} 0.75 & 1.25 \end{bmatrix}$  then find the value of PS.

PS = \_\_\_\_\_

- 2 At a swimming competition, 7 points are awarded for each first place finish, 4 points for each second place, and 2 points for each third place. The number of first, second, and third places won by 4 schools are shown in the below table. Find which school won the competition.

School Name	1 <sup>st</sup> place	2 <sup>nd</sup> place	3 <sup>rd</sup> place
St. Xavier's	4	7	3
St. Paul's	8	9	1
St. Peter's	10	5	3
Lincoln	3	3	6

. Thus St. Peter's won the meet with a total of 96 points.

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### Answers

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	Small Cup	Large Cup
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Represent the above table by a matrix S. If a matrix  $P = \begin{bmatrix} 0.75 & 1.25 \end{bmatrix}$  then find the value of PS.

$$PS = \underline{\begin{bmatrix} 9.75 & 6.75 \end{bmatrix}}$$

- 2 At a swimming competition, 7 points are awarded for each first place finish, 4 points for each second place, and 2 points for each third place. The number of first, second, and third places won by 4 schools are shown in the below table. Find which school won the competition.

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$$\begin{bmatrix} 62 \\ 94 \\ 96 \\ 45 \end{bmatrix} . \text{ Thus St. Peter's won the meet with a total of 96 points.}$$