

# FALL FINAL

Name \_\_\_\_\_ Period \_\_\_\_\_

1-10. A national retail chain studied the shopping habits of their customers by region. The following two-way table organizes unit sales data by region for each of the six sales categories. Assuming a sale is chosen at random, use this data to calculate the following probabilities. Write your answers as fractions.

Region/Sales Category	Clothes	Cosmetics	Sports	Electronics	House wares	SUBTOTALS
West Region	645	455	786	375	239	2,500
East Region	1,223	3,008	4,457	2,531	1,281	12,500
Central Region	609	1,125	1,357	953	956	5,000
SUBTOTALS	2,477	4,588	6,600	3,859	2,476	20,000

1.  $P(\text{Central Region})$
2.  $P(\text{Sports and East Region})$
3.  $P(\text{West Region/Cosmetics})$
4.  $P(\text{House wares/East Region})$
5.  $P(\text{Central Region/Clothes})$
6.  $P(\text{West Region OR Central Region})$
7.  $P(\text{East Region OR Sports})$
8.  $P(\text{Not a West Region sale})$
9. What proportion of the central region sales involve house wares?
10. What proportion of the cosmetics sales occur in the west region?

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2.  $P(\text{Electronics and Central Region})$
3.  $P(\text{East Region/Cosmetics})$
4.  $P(\text{Housewares/Central Region})$
5.  $P(\text{Central Region/Clothes})$
6.  $P(\text{East Region OR Central Region})$
7.  $P(\text{East Region OR Housewares})$
8.  $P(\text{Not a East Region sale})$
9. What proportion of the east region sales involve housewares?
10. What proportion of the cosmetics sales occur in the central region?

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3.  $P(\text{West Region/Cosmetics})$
4.  $P(\text{Sports/East Region})$
5.  $P(\text{Central Region/Clothes})$
6.  $P(\text{West Region OR Central Region})$
7.  $P(\text{East Region OR Housewares})$
8.  $P(\text{Not a West Region})$
9. What proportion of the west region sales involve clothes?
10. What proportion of the electronics sales occur in the east region?

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6.  $P(\text{West Region OR Central Region})$
7.  $P(\text{Central Region OR Electronics})$
8.  $P(\text{Not a West Region sale})$
9. What proportion of the east region sales involve housewares?
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