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Preparing For ^{the} Ch. 11 Test

① Warm Up
with optional
crossword puzzle

②

FRAPPY!

Ch. 11 Review Exercises
(with videos)

Ch. 11 AP Practice
TEST



Determine which chi-square test is appropriate in each of the following settings. Explain your reasoning. Do not carry out the test!

- (a) Have older cell-phone users caught on to texting? A random sample of individuals who are less than 30 years old and a random sample of individuals who are at least 30 years old were asked if they make more phone calls or send more text messages on their cell phone on a typical day. Here are the results:

		Age group		Total
		Less than 30	At least 30	
Response to question	More texts	146	32	178
	More phone calls	34	98	132
Total		180	130	310

Data from: 2 - independ. rand. samples
(less than 30, at least 30)



Chi-Square Test for Homogeneity

- (b) Are older and younger employees equally prone to having accidents? To investigate this question, a researcher at a light manufacturing plant classified a random sample of accidents by type and by age of the employee.

		Accident type			Total
		Sprain	Burn	Cut	
Age	Less than 25	9	17	5	31
	At least 25	61	13	12	86
Total		70	30	17	117

Data from: single random sample (n=117 accidents)
with accident classified according to
two categorical variables



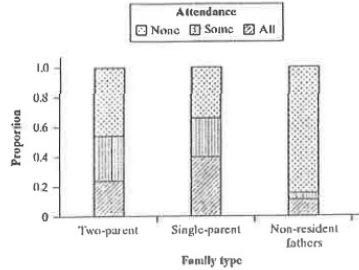
Chi-Square Test for Independ.

2

Mrs. Overstreet is studying fathers' involvement in their children's education. She interviews a random sample of fathers of school-age children in a large school district. One question concerns regularly scheduled parent-teacher conferences. Here is a two-way table of the results:

Family type	Attendance rate			Total
	Attended all	Attended some	Attended none	
Two-parent	109	132	203	444
Single-parent	15	10	13	38
Non-resident father	11	5	82	98
Total	135	147	298	580

The segmented bar graph (provided below) illustrates the relationship between these two variables. Describe what you see.



The more direct responsibility fathers have for their daily care of their children, the more likely they are to attend parent-teacher conferences.

fathers in one-parent families are most likely to attend all conferences ; non-resident fathers rarely attend any conferences