

CHEATING IN HIGHER EDUCATION: THE CASE OF MULTI-METHODS CHEATERS

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ABSTRACT

Cheating in academia has been the focus of several studies, mainly trying to determine how often students cheat. This paper examines a different approach, as we not only surveyed the level of cheating occurring in university setting, but also focus on ascertaining whether or not students are willing to cheat their way to a degree by using multiple ways of cheating throughout their college years. We used a survey presenting 16 different scenarios that was submitted to students asking them whether the action of the fictional students in the scenario constituted cheating or not. The analysis of the results showed that cheating does occur in college and that a certain number of students do use several methods of cheating while trying to earn their degree.

Keyword: *Academic dishonesty, Higher Education.*

INTRODUCTION

In the academic world, a major problem exists. That issue is cheating. Pullen, Ortloff, Casey, and Payne (2000) refers to it as “the bane of higher education” (p.616), and Moffatt advance that “the university at the undergraduate level sounds like a place where cheating comes almost as naturally as breathing, where it’s an academic skill almost as important as reading, writing, and math” (in Whitley, 1998, p.2). However, determining how many students cheat is difficult to figure out precisely as most data comes through self-reporting, and it is likely that students do not want to advertise their cheating, making measurement difficult.

Nevertheless, several studies tried to establish a baseline of how many students engage in academic dishonesty. One of the first studies (Baird, 1980) found that 75.5% of undergraduates from several majors had cheated while in college. In 1992, Meade reported a rate of cheating of 87% in various majors at top universities. McCabe and Trevino (1997) reported a range of 13% to 95% of students cheated at one point during their academic career. In his 2005 study McCabe reported that 70% of the 50,000 undergraduate students surveyed from 2002 to 2005 had cheated; the data was gathered from over 60 campuses nationwide. In his research Park (2003) advanced that a minimum of 50% of students are cheating. Other studies put that percentage at

63% (Nonis and Swift, 1998), or even up to 75% (Kidwell, Wozniak, and Laurel, 2003; Chapman, Davis, Toy, and Wright, 2004). Moreover, Whitley (1998) reviewed 46 studies conducted from 1970 to 1996; the range of the number of students engaging in academic dishonesty was from 9% to 95% across the different samples. The mean across the samples was 70.4%. This mean is similar to the number found by Kidwell, Wozniak, and Laurel in their 2003 study, where students self-reported any academic dishonest activity that they had participated in more than once. According to that measure 74.5% of students are cheaters. Those who only cheated once were not included because they are less of a threat to the academic community. Furthermore, students also reported to more frequently cheating in forms that they considered less serious such as collaboration and plagiarism of small excerpts.

Also, there is a developing body of evidence that academic dishonesty is increasing; with the increase in tuition, the advance in technology, and the increase in online class offerings, new ways to engage in academic dishonesty are available for potential cheaters (Born, 2003; Park, 2003; Scanlon, 2004; Eastman, Iyer, and Eastman, 2006; Brown, McInerney, 2008, Josien and Seeley, 2012). Indeed, Brown and McInerney found significant increases in 7 of 16 cheating practices between a 1999 and a 2006 sample using the same questionnaire, with an average usage increase of these 7 practices of 19.2%. Finally, one of the latest studies confirms this trend, Jones (2011) found that 92% of her students surveyed indicated that they had or they knew someone that cheated. Finally, Mason (2006) also report an increase in cheating, reported to be as occurring frequently to very frequently by 61.7 percent of students. Furthermore, it is disheartening to know that many students (52.1 %) perceive cheating as only a minor problem at their university. (Mason, 2006).

Therefore, the only conclusion that one can have is, that cheating does take place in higher education and that the number of participants is significantly high. This is a very important issue as Nonis and Swift (2001), based on the study of 1,051 business students, reported that the frequency of cheating in college was highly correlated with cheating at work. Also, Lawson (2004) found that business school students who cheat are more likely to be accepting of unethical workplace behavior, and there is a growing body of evidence that a positive correlation between cheating while in college and behaving unethically while at work exists (Brown & Choong, 2005; Nonis & Swift, 2001; Sims, 1993; Hilbert, 1985).

In addition, academic dishonesty has several impacts on students that do not engage in cheating. First of all, many firms that engage in on-campus recruiting require a minimum grade point average for students who sign up for interviews. Thus, students who engage in academic dishonesty may gain an unfair advantage that goes well beyond the higher grade earned through cheating. GPA is also typically considered an important selection criterion for hiring purposes. Finally, another way in which peers of the cheaters may be harmed is the potential backlash and scrutiny that may be implemented once a cheater has been caught, as well as the potential for distrust and poorer interpersonal relationship between students and faculty.

LITERATURE REVIEW

Most studies on academic dishonesty focused on situational and individual factors that may contribute to cheating behavior (McCabe and Trevino, 1993, 1996, 1997; Straw, 2002; Eastman, Iyer, Eastman, 2006). More specifically, McCabe and Trevino (1997) found that cheating was influenced by age, gender, grade point average, peers, and Greek membership.

The literature found that younger, immature students cheat more than older, more mature students (Choong and Brown, 2007); upper division classes encounter less cheating than lower division classes, and unmarried students cheat more than married ones. (Whitley, 1998; McCabe and Trevino 1997; Park, 2003; Straw, 2002).

Crown and Spiller (1998) looked at 16 previous studies on the relationship between gender and academic dishonesty, and found mixed statistical results. Klein, Levenburg, McKendall, and Mothersell (2006) established the same inconsistency regarding gender and cheating. They reported that about half the studies analyzing gender and academic dishonesty showed that males cheat more often than females, while the other half found no relationship. However, McCabe and Trevino (1997) found men to be more involved than woman in academic dishonesty. The same tendency was found by Buckley, Wiese, and Harvey (1998) and Chapman and Lupton (2004), who also reported a higher probability of males engaging in academic dishonesty than females. On the other hand, Leming (1980) reported that under a low risk condition, woman cheated more than men, but that a higher risk of punishment reduced the risk of cheating only for women. More recently, Anitsal, Anitsal, and Elmore (2009) found that both genders are engaged in cheating behaviors, but that their approaches to cheating were different. Also interesting to note is that Kisamore, Stone and Jawahar (2007) found that women are now rivaling men in the amount of academic misconduct at the university level.

Regarding grade point average, Crown and Spiller (1998) analyzed 14 studies focusing on grades and academic dishonesty. They established that the majority of studies found that students with lower GPAs cheat more than students with higher GPAs. Straw (2002), also reported that students with a lower GPA are more likely to cheat as they have more to gain and less to lose than students with a higher GPA. Finally, Choong and Brown (2007) reported that GPA is inversely related to flagrant cheating, but found no significant difference in other types of cheating among brighter students and their counterparts.

On the subject of peers, McCabe and Trevino (1997) found that “the most powerful influential factors were peer-related contextual factors... Academic dishonesty was lower when respondents perceived that their peers disapproved of such misconduct, was higher among fraternity/sorority members, and was higher when students perceived higher levels of cheating among their peers” (page 391). In a similar manner, results from student samples suggested that they cheat less when they feel that they are more likely to get caught (Corcoran and Rotter, 1989) and when their college has a known honor code (May and Lyod, 1993; McCabe and Trevino, 1993).

Regarding Greek membership, several studies advance that students involved in Greek life are more likely to cheat (McCabe and Trevino, 1997; Straw, 2002; Park, 2003). One of the main reasons for such behavior is grounded in the fact that fraternities are environments where norms, values, and skills associated with cheating can easily be shared as they provide access to resources (e.g. old test files) that facilitate academic dishonesty (McCabe and Trevino, 1997, page 383).

Kisamore et al (2007) notes that one of the best things institutions can do to reduce the amount of academic dishonesty is to build a culture that promotes professional behavior and ethical conduct. This importance can be communicated by adopting an honor code, and making it easier to report detected academic dishonesty, with penalties that can serve as proper deterrents. Also for business students, Glenn (1992) shows that students who have completed a standalone business ethics course are less likely to cheat than those who haven't gone through an ethics class. Bloodgood, Turnley, and Mudrack show in their 2007 study that ethics courses had more pronounced effects on those who scored low in religiosity, as well as those who scored higher in intelligence. For those who scored low in intelligence, cheating remained about the same after an ethics course. Those with high intelligence and religiosity were much less likely to cheat than their peers and in those with high religiosity scores but low intelligence scores religiosity has much less effect on cheating.

As Kidwell et al (2003) mentioned, there are different ways of cheating with various level of seriousness. They also ventured that there is a difference in the threat to the academic community from students cheating once compared to students cheating multiple times. Following that line of thought, we advance that not only students who cheat multiple times are a threat to academia but those who cheat multiple times with different methods are even more of a threat as it indicates a clear, conscious, active decision to engage in academic dishonesty. We formulate that these multi-methods cheaters are individuals that considers cheating as an acceptable mean to achieve their end, and that they adapt their method to the opportunity available to them at the time. This attitude should put these students in a different group altogether, as they are different than students who cheated only once.

However, there is a gap in the literature as we could not find any study that quantified that aspect of academic dishonesty in a university setting.

Our goal, then will be to determine not only the prevalence of academic dishonesty in our sample but also to discover what percentage of cheaters are pursuing several methods of cheating during their curricular activities.

METHODOLOGY

A total of 16 scenarios were created for the study (see Appendix A for the full questionnaire). Some example scenarios are: "Jane is taking a test in a learning center by herself. She is stumped by one question and texts her friend Maria for help. Maria responds with an

incorrect answer.” and “John is taking a test in class, while professor Absent Minded is not looking, John looks at his friend Jane’s test and sees that she answered “C” for question #5.” Each respondent was then asked if Jane, John, or both were cheating. The scenarios can be grouped into four categories of cheating: in class collaboration (voluntary or involuntary), out of class collaboration (i.e. take home exam), improper use of technology (i.e. cell phone), and plagiarism.

The surveys were distributed to students in institutions located in South Dakota, Louisiana, and Utah. The institution in South Dakota is a small faith based liberal art college, while the one in Louisiana is a regional extension of a large state-funded university, and the institution in Utah is a large state university.

In order to select our respondents for the survey, a convenient sampling methodology was used; surveys were administered during class time and were collected a few minutes after being handed out, usually as students exited the class. As anonymity was guaranteed, it wasn’t possible to track who had responded or not to the survey; therefore, a response rate cannot be precisely calculated. However, we estimate that the response rate associated with our study is in the high 80% rate based on the number of surveys distributed and the number returned completed (some students could have been enrolled in several surveyed classes). In total, we obtained 256 usable surveys that we used to conduct our analysis, with 76 surveys done by freshman, 52 from sophomores, 73 from juniors and 54 from seniors.

RESULTS

Prominence of academic dishonesty

In our sample, 95 students self-reported that they had previously cheated in college. That number put our percentage of students cheating in the low range compared to other studies. Indeed, only 37.11% of the respondents indicated that they have cheated.

Further analysis per classification of student showed that freshmen and sophomores seem to cheat less than their junior and senior counterpart. Table 1 shows the number of students that reported cheating per student classification. Percentage wise, students in higher classifications are more likely to have engaged in academic dishonesty than students in lower classifications. In our sample, juniors were the most likely to have cheated at least once in their college education (51.47%). An ANOVA analysis showed no statistical significance between the four groups of students, therefore, no classification of students is more likely to cheat than any other classification.

Table 1: Number of cheaters per classification

	Freshman	Sophomore	Junior	Senior
N	76	52	73	54
Cheater	21	18	36	20
%	27.63	34.62	49.31	37.04

Prominence of multi-methods of cheaters

The analysis of our responses yielded that 38 of the 95 students who self-reported that they had engaged in academic dishonesty, not only cheated but cheated while using different methods to do so. This means that 40% of cheaters in our sample used at least 2 different methods of cheating when they cheated. Compared to our total sample, multi-methods cheaters represent slightly less than 15% of the students surveyed.

When we analyzed our results through the classification of students, we found that lower classification (freshman and sophomore) cheaters had about a quarter of them using several methods, while the upper classification (junior and senior) cheaters had half of their ranks to be multi-methods cheaters. Table 2 represents the number of multi-method cheaters per classification and its relative percentage to self-reported cheaters and to our sample.

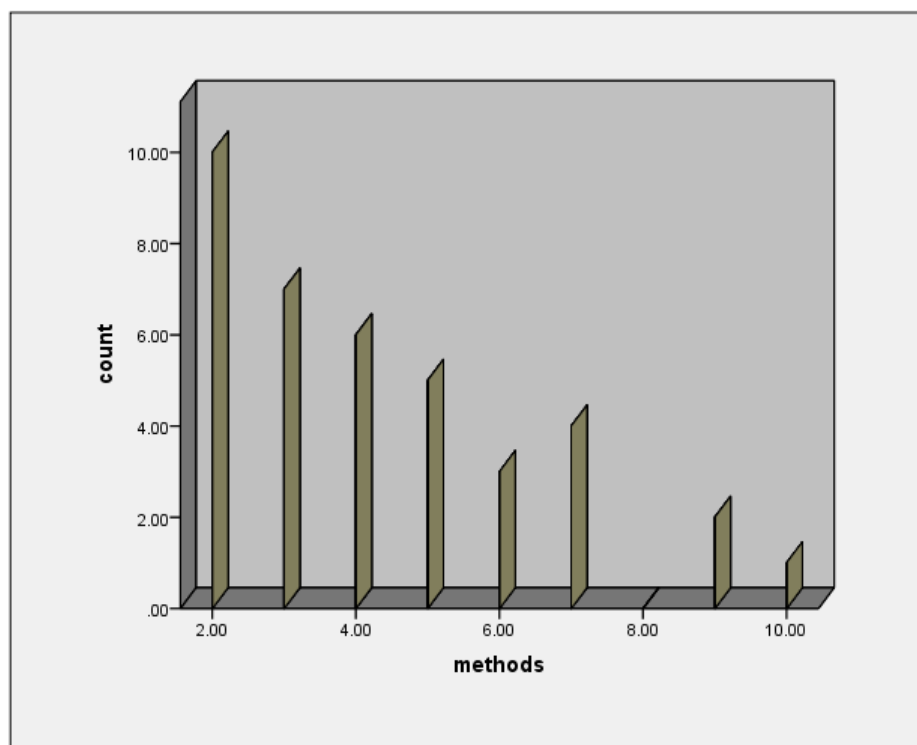
We also found that while the highest percentage of multi-methods cheaters used 2 different methods (i.e. getting an answer from a friend during a test and working with a friend on a take-home exam), the average, multi-methods cheater uses more than 4 different means to cheat (4.31 average). Finally, the highest number of methods used reported was 10 (this particular student used 10 different ways to cheat)! Chart 1 summarizes the frequency of the numbers of methods used by the multi-methods cheaters.

Furthermore, we learned that the most common way that students cheat is the “classical” in class communication between two students (sharing a MCQ result); this method was used 29 times. The next two most common methods are out of class communication type, both receiving 25 uses, in which students worked together on a take home exam or gathered information on an upcoming test from someone that already took it. Table 3 recaps the frequency of each method used, broken down by classification of students.

Table 2: Number of multi-method cheaters per classification (2 or more different methods of cheating)

	Freshman	Sophomore	Junior	Senior
N	76	52	73	54
Cheater	5	5	18	10
% sample	6.58	9.62	24.66	18.52
% cheater	23.81	27.78	50	50

Chart 1: frequency of methods used



Our questionnaire is composed of 16 fictional scenarios that can be grouped into four distinct categories of cheating. Two scenarios are related to in class collaboration (#1 and 12), five are associated with out of class collaboration (#3, 7, 11, 13, and 15), two are related to plagiarism (#2 and 9), and the remaining six are related to the use of technology in order to cheat (technological, #4, 5, 6, 8, 10, and 14).

We analyzed our results on two main axes, the first one focusing on how many categories multi-methods cheaters used, while the second axe is determining which category is the most likely to be used by cheaters.

We found that 16.79% of multi-methods cheaters engaged in all four categories of cheating while the largest percentage of multi-methods cheaters engages in two categories of cheating (14 out of 38 or 36.84%). The two most likely categories to be used by multi-methods cheaters are “outside the class room collaboration” and “inside the classroom collaboration”. “Outside the classroom” category is used by multi-methods cheaters 81.58% of the time, and is universally used among senior multi-methods cheaters. The second highest category used is “inside the classroom”, with a 65.79% chance of being utilized by the multi-methods cheaters. Finally, “technological” and “plagiarism” ended up in a tie insofar as being used by the multi-methods cheaters (44.74%). Table 4 summarizes the finding related to the categories of cheating.

Table 3: frequency of methods of cheating																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Freshman	10	4	1	2	4	3	1	3	1	0	4	4	3	0	2	1
Sophomore	4	7	1	0	0	2	3	1	1	0	2	4	1	0	1	0
Junior	12	8	11	2	0	6	5	6	4	5	11	8	10	2	7	2
Senior	3	1	7	0	1	0	7	1	3	2	8	3	11	0	3	2
total	29	20	20	4	5	11	16	11	9	7	25	19	25	2	13	5
1	In class collaboration (voluntary)															
2	Plagiarism															
3	Out of class collaboration															
4	Technological															
5	Technological															
6	Technological															
7	Out of class collaboration															
8	Technological															
9	Plagiarism															
10	Technological															
11	Out of class collaboration															
12	In class communication (involuntary)															
13	Out of class collaboration															
14	Technological															
15	Out of class collaboration															
16	Technology															

Table 4: Categories of cheating									
	# of Cheaters	# of categories used				category used			
		1	2	3	4	I	O	P	T
Freshman	5	1	0	2	2	4	4	3	4
Sophomore	5	0	2	3	0	4	2	5	2
Junior	18	4	7	4	3	11	15	7	9
Senior	10	3	5	1	1	6	10	2	2
Total	38	8	14	10	6	25	31	17	17
I:	In class collaboration								
O:	Out of class collaboration								
P:	Plagiarism								
T:	Technological								

LIMITATIONS

As with any study, there are limitations to the conclusions that we can reach. First of all, our biggest limitation is that we have to rely on self-reported data. On a topic like cheating, it is easy to imagine that students may not be very forthcoming when a faculty member asks them whether or not they ever have cheated, even with the promises of anonymity. Therefore, we have

to be careful with the results that we gathered as it may not be a true reproduction of what really happened. Also, our sample size is relatively small; we only collected 256 usable surveys for our study, which for an exploratory study should be sufficient, but if we want to enhance our findings to the rest of the population, we would need to increase our sample size. Furthermore, replicating our study would increase our convergent validity.

DISCUSSION

We set up our study to check the prominence of cheating in university setting. As expected, unfortunately, we did find that there were cheaters in our sample. Even if our academic dishonesty rate seems lower than other studies reported, there is still a significant portion of our sample that engaged in cheating, as more than 1 in 3 students indicated that they had cheated while in college.

We also found that the rate of academic dishonesty increases as students progress toward the end of their undergraduate degree, indeed, freshman are less likely to have cheated than seniors. One likely explication for that phenomenon is the simple fact that seniors have had more “opportunities” to cheat than their fellow freshman. Another explanation may also reside in the fact that seniors may have seen some of their fellow students cheat with no consequences and decided to “join the movement”, however, further research will need to be done to determine if seeing others cheat has a significant impact on one’s decision to cheat.

Another finding from our study is the fact that there is a significant portion of cheaters that use several different methods to cheat. We found that not only did 15% of our sample use diverse ways of cheating; we also found that 40% of cheaters did engage in multiple methods of cheating. This is significant as it indicates a “willingness” to engage in academic dishonesty. One could hope that a student cheats once or twice, submitting to the temptation for one reason or another, but regrets it as they know what they did was wrong. However, the same may not be said for someone that engages in multiple ways to cheat, as we believe it indicates that their values are not ethically correct. Furthermore, when we link that result to the positive correlation between cheating while in college and behaving unethically in the workplace (Brown & Choong, 2005; Nonis & Swift, 2001; Sims, 1993; Hilbert, 1985), it begins to draw a very bleak picture. If 15% of students are willing to do whatever it takes to achieve their college degrees, what are these 15% going to do when they are in the workforce? One could think that they are still going to believe that the end justifies the means, and therefore would be highly likely to engage in unethical behaviors.

An additional outcome of our study is in the type of cheating that students choose to participate in. We found that students are most likely to cheat out of the classroom. This finding indicates that for professors who use take home style exam or use at home exercises as part of their grading, caution need to be taken. If our goal is to encourage group work, then we are succeeding as a large majority of students engage in such activity, whether or not it is permitted

to do so! Indeed, 46 of 95 self-reported cheaters (48%) communicate with fellow students regarding test material. Also, if they engage in multiple methods to cheat, that percentage rises to over 81% (and 100% with the seniors in our sample). If our aim is to test individual knowledge and we expect our students to work individually, then it seems that we are sadly mistaken.

Our final thought regards plagiarism. The attention that plagiarism received in the literature is overwhelming compared to the rest of academic dishonesty. However, our research shows that plagiarism is not a top method used by cheaters. This can be interpreted in several ways: all the attention paid to plagiarism worked, and students do not engage in plagiarism as they know what it is and that it will not be tolerated, or we are paying plagiarism too much attention instead of focusing on other types of academic dishonesty.

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APPENDIX A

Questionnaire

John and Jane are two imaginary college students. Here are 16 different situations, please tell us if you think that any of these constitutes cheating. Once completed, return the questionnaire to the envelop provided, the last respondent will seal the envelop. To ensure anonymity, please do not write your name on the questionnaire. Participation is voluntary, if you do not want to participate or have done so in another class, return your questionnaire blank.

- 1) John is taking a test in class, while professor Absent Minded is not looking; John asks his friend Jane if "C" is the correct answer for question #2. Jane nods.
 - a) John is cheating Yes ☐ No ☐
 - b) Jane is cheating Yes ☐ No ☐
- 2) While writing a paper for Dr. Shake Spears, Jane goes to the library and downloads a few papers to support her writing. After reading them, she cuts and pastes in her text some sections of what she has read and she doesn't cite her sources.

Jane is cheating Yes ☐ No ☐
- 3) While working on a take home test, John asks his friend William to double-check his math for a problem that is in the test. William doesn't find any error.

John is cheating Yes ☐ No ☐
- 4) Jane's calculator comes preloaded with mathematical formulas. John's calculator doesn't have some formulas in it. Both calculators are in an approved list by their professor. Before the test, John enters the missing formulas in his calculator. They both use some of the formulas during the test.
 - a) John is cheating Yes ☐ No ☐
 - b) Jane is cheating Yes ☐ No ☐
- 5) Jane is taking a test in a learning center by herself. She is stumped by one question and texts her friend Maria for help. Maria doesn't respond.

Jane is cheating Yes ☐ No ☐
- 6) John is taking a test in class, while professor Absent Minded is not looking; John looks at his notes in his cell phone and finds that the answer for question 3 is "D".

John is cheating Yes ☐ No ☐
- 7) While working on her take home test, Jane asks John if he found the same response for a given question. He didn't, she checks her math and finds an error, she corrects it and now her answer matches John's.
 - a) John is cheating Yes ☐ No ☐
 - b) Jane is cheating Yes ☐ No ☐

- 8) John is taking a test in class, while professor Absent Minded is not looking; John looks at his notes in his cell phone, but does not find the answer he was looking for.
John is cheating Yes ☐ No ☐
- 9) While writing a paper for Dr. Shake Spears, Jane goes to the library and downloads a few papers to support her writing. After reading them, she cuts and pastes in her text some sections of what she has read and she cites only a few of her sources.
Jane is cheating Yes ☐ No ☐
- 10) Jane is taking a test in a learning center by herself. She is stumped by one question and texts her friend Maria for help. Maria responds with an incorrect answer.
Jane is cheating Yes ☐ No ☐
- 11) John and Jane are in the same class, Professor Absent Minded gives a take home exam for the class. John and Jane work together on the exam.
a) John is cheating Yes ☐ No ☐
b) Jane is cheating Yes ☐ No ☐
- 12) John is taking a test in class, while professor Absent Minded is not looking, John looks at his friend Jane's test and see that she answered "C" for question #5.
a) John is cheating Yes ☐ No ☐
b) Jane is cheating Yes ☐ No ☐
- 13) John couldn't be here for a test and asked his professor if he could take it at a later time. Before taking his test, John discusses with Jane about what he **really** needs to review for the test.
a) John is cheating Yes ☐ No ☐
b) Jane is cheating Yes ☐ No ☐
- 14) Jane is taking a test in a learning center by herself. She is stumped by one question and texts her friend Maria for help. Maria responds with the correct answer.
Jane is cheating Yes ☐ No ☐
- 15) Professor Absent Minded likes to use listing questions in his test (i.e. list the Marketing four Ps). John knows that and writes possible questions and answers on paper to help in his review. Jane asks John if she can use his review notes.
a) John is cheating Yes ☐ No ☐
b) Jane is cheating Yes ☐ No ☐
- 16) Jane's calculator, which is approved by her mathematics professor, comes preloaded with mathematical formulas. Before a test, Jane entered more formulas in her calculator. Jane didn't use any of the extra formulas during the test.
Jane is cheating Yes ☐ No ☐

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