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Question: 1. Consider the statement, "For all natural numbers n , if n is prim...

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Discrete Math:

1. Consider the statement, "For all natural numbers n , if n is prime, then n is solitary." You do not need to know what *solitary* means for this problem, just that it is a property that some numbers have and others do not.
- Write the converse and the contrapositive of the statement, saying which is which. Note: the original statement claims that an implication is true for all n , and it is that implication that we are taking the converse and contrapositive of.
 - Write the negation of the original statement. What would you need to show to prove that the statement is false?
 - Even though you don't know whether 10 is solitary (in fact, nobody knows this), is the statement "if 10 is prime, then 10 is solitary" true or false? Explain.
 - It turns out that 8 is solitary. Does this tell you anything about the truth or falsity of the original statement, its converse or its contrapositive? Explain.
 - Assuming that the original statement is true, what can you say about the relationship between the set P of prime numbers and the set S of solitary numbers. Explain.

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Expert Answer

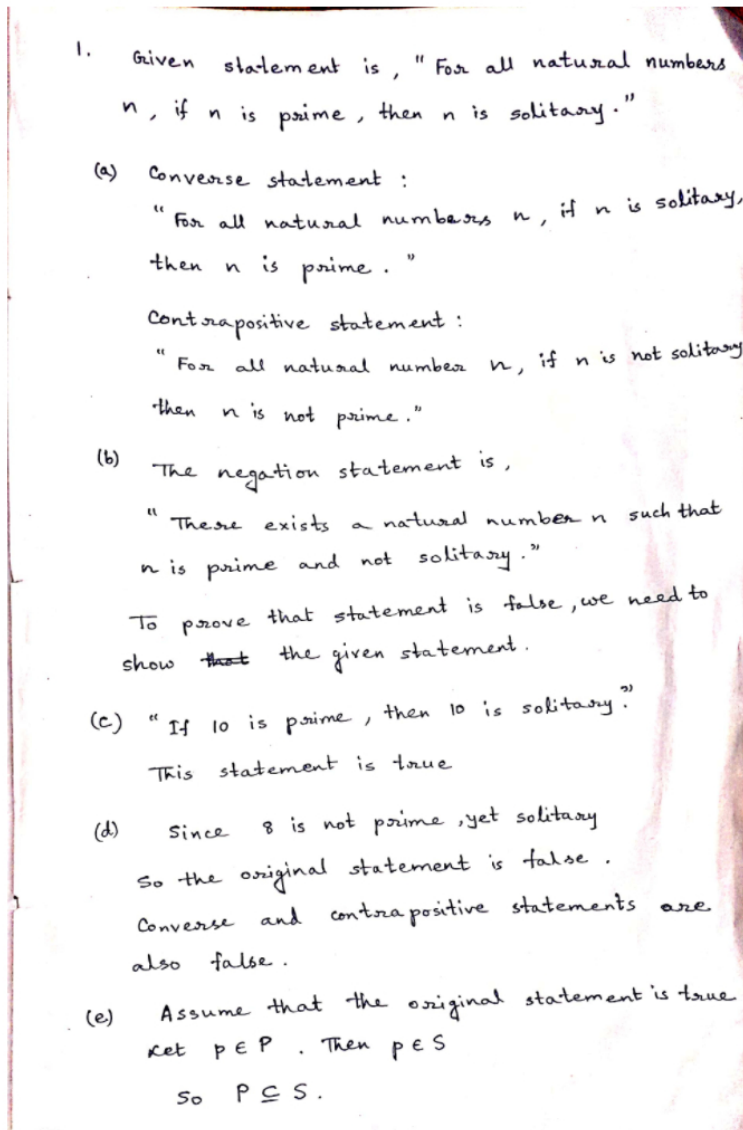


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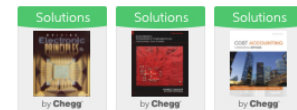
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Q: 3. (25 points) Consider the statement, "For all natural numbers n , if n is prime, then n is solitary." You do not need to know what solitary means for this problem, just that it is a property that some numbers have and others do not a. Write the converse and the contrapositive of the statement, saying which is which. Note: the original statement claims that an implication is true...

A: [See answer](#)

Q: Discrete Math: I specifically need help with 1.B) and 1.D). Thank you!

A: [See answer](#)

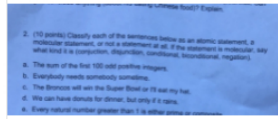
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Up next for you in Advanced Math

Consider the statement, "For all natural numbers n , if n is prime, then nn is solitary." You do not need to know what solitary means for this problem, just that it is a property that some numbers have and others do not.

[See answer](#)

- vously Chinese food)? Explain. 2. (10 points) Classify each of the sentences below as an atomic statement, a ...



[See answer](#)

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Q: 3. (25 points) Consider the statement, "For all natural numbers n , if n is prime, then n is solitary." You do not need to know what solitary means for this problem, just that it is a property that some numbers have and others do not a. Write the converse and the contrapositive of the statement, saying which is which. Note: the original statement claims that an implication is true...

A: [See answer](#)

Q: 1. Let $A = \{2,4,6,8\}$. Suppose B is a set with $|B| = 5$. a) What are the smallest and largest possible values of $|A \cup B|$? Explain your answer. b) What are the smallest and largest possible values of $|A \cap B|$? Explain your answer. c) What are the smallest and largest possible values of $|A \times B|$? Explain your answer. 2. Draw the Venn diagrams for the following. No credit...

A: [See answer](#) 100% (3 ratings)

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