Homework 1

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Problem 1. *Is the following an argument?*

1. *It is raining.*
2. *If it is raining then there are clouds in the sky.*
3. *Bats are bugs.*

Problem 2. *Is the following an argument?*

1. *It is raining.*
2. *Open the pod bay doors.*
3. *If it is raining then there are clouds in the sky.*

Problem 3. *Is the following argument valid?*

1. *It is not raining.*
2. *If it is raining then there are clouds in the sky.*
3. *There are no clouds in the sky.*

Problem 4. *Is the following argument valid?*

1. *It is raining.*
2. *It is raining.*

Problem 5. *Is the following argument sound? Why or why not?*

1. *Grass is green.*
2. *If grass is green, then grass is not purple.*
3. *Grass is not purple.*

Problem 6. *Is the following argument sound? Why or why not?*

1. Bats are bugs.
2. If bats are bugs, then Istanbul is in Egypt.
3. Istanbul is in Egypt.

Problem 7. *Translate the sentence below into the language of propositional logic (that is, into what is called TFL in forallx).*

   "Bats are bugs and grass is green."

Problem 8. *Translate the sentence below into the language of propositional logic (that is, into what is called TFL in forallx).*

   "Winter comes after fall."

Problem 9. *Translate the sentence below into the language of propositional logic (that is, into what is called TFL in forallx).*

   "Addie and Anse will not both go to the party."

Problem 10. *Translate the sentence below into the language of propositional logic (that is, into what is called TFL in forallx).*

   "Neither a borrower nor a lender be."

Problem 11. *Translate the sentence below into the language of propositional logic (that is, into what is called TFL in forallx).*

   "Addie will attend the funeral if and only if Anse will not."

Problem 12. *Translate the sentence below into the language of propositional logic (that is, into what is called TFL in forallx).*

   "Whenever my hypos get such an upper hand of me, that it requires a strong moral principle to prevent me from deliberately stepping into the street, and methodically knocking people's hats off—then, I account it high time to get to sea as soon as I can."

Problem 13. *Translate the argument below into the language of propositional logic (that is, into what is called TFL in forallx).*

1. *Grass is not red.*
2. *If grass is not red, then grass is not scarlet.*
3. *Grass is not scarlet.*

Problem 14. *Translate the argument below into the language of propositional logic (that is, into what is called TFL in forallx).*

1. *It is raining.*
2. *It is raining.*

Problem 15. *Translate the argument below into the language of propositional logic (that is, into what is called TFL in forallx).*

1. *Addie did not attend the funeral.*
2. *Either Addie attended the funeral or Anse did.*
3. *Anse attended the funeral.*