Valid: If the premises are true the conclusion necessarily follows.

Remember, validity is something that is determined by the relationship between the premises and the conclusion. The question is not whether the premise and the conclusion are true or not but rather does the conclusion follow from the premises.

1. Invalid
Cats are mammals.
Dogs are mammals.
Therefore, dogs are cats.
**True Premises, False Conclusion**

2. Valid
Cats are mammals.
Tigers are cats.
Therefore, tigers are mammals.

3. Invalid
Cats are mammals.
Tigers are mammals.
Therefore, tigers are cats.
**True Premises, False Conclusion**

4. Valid
Dogs are cats.
Cats are birds.
Therefore, dogs are birds.

5. Invalid
Cats are birds.
Dogs are birds.
Therefore, dogs are cats.
**False Premises, False Conclusion**

6. Valid
Cats are birds.
Birds are mammals.
Therefore, cats are mammals.

7. Invalid
Cats are birds.
Tigers are birds.
Therefore, tigers are cats.
We should never be misled by true premises or true conclusions to suppose (automatically) that an argument is valid. Nor should we be misled by false premises or false conclusions to suppose that it is invalid. Nor should we be misled by valid reasoning to suppose that statements are true, or by invalid reasoning to suppose that statements are false.