1.

b) Antecedent: "The moon is made of cheese"
Consequent: "8 is an irrational number"

c) Antecedent: "b divides 3"
Consequent: "b divides 9"

e) Antecedent: "a is convergent"
Consequent: "A sequence a is bounded"

g) Antecedent: "$1 + 1 = 2$"
Consequent: "$1 + 2 = 3$"

h) Antecedent: "The fish bite"
Consequent: "The moon is full"

2.

b) Converse: "If 8 is an irrational number, then the moon is made of cheese"
Contrapositive: "If 8 is not an irrational number, then the moon is not made of cheese"

c) Converse: "b divides 9 only if b divides 3"
Contrapositive: "b does not divide 9 only if b does not divide 3"

e) Converse: "A sequence a is convergent whenever a is bounded"
Contrapositive: "A sequence a is not convergent whenever a is unbounded"

g) Converse: "$1 + 1 = 2$ is necessary for $1 + 2 = 3$"
Contrapositive: "$1 + 1 \neq 2$ is necessary for $1 + 2 \neq 3$"

h) Converse: "The moon is full only when the fish bite"
Contrapositive: "The moon is not full only when the fish don't bite"

5.

b) "Hexagons have size sides" $\rightarrow$ true
"The moon is made of cheese" $\rightarrow$ false
$T \rightarrow F \equiv F$, so this statement is false.

d) "The Nile River flows east" $\rightarrow$ false
"64 is a perfect square" $\rightarrow$ true
$F \rightarrow T \equiv T$, so this statement is true.

e) "Earth has one moon" $\rightarrow$ true
"The Amazon River flows into the North Sea" $\rightarrow$ false
$T \rightarrow F \equiv F$, so this statement is false.

f) "Euclid's birthday was April 2" $\rightarrow$?
"Rectangles have four sides" $\rightarrow$ true
The antecedent is true, so this statement is true.

g) "$\sqrt{2}$ is not irrational" $\rightarrow$ false
"5 is prime" $\rightarrow$ true
$F \rightarrow T \equiv T$, so this statement is true.

h) "$1 + 1 = 2$" $\rightarrow$ true
"$3 > 6$" $\rightarrow$ false
$T \rightarrow F \equiv F$, so this statement is false.

14.

a) "If 3 is an integer, then this class does not have a textbook."

b) This is not possible, since if a conditional is false it's converse will always be true. This is because all other combinations of truth values for P and Q in a conditional statement lead to a true statement.

c) "If earth is a planet, then this sentence does not exist."

d) This is not possible, since the contrapositive of a conditional always has the same truth value of the original conditional statement. Thus a false conditional can never have a true contrapositive.