Assignment_03

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2.

a), d) is true.

b), c) is flase.

8.

a) For all animals, if it is a rabbit, then it is a hops.

b) For all animals, it is a rabbit and a hops.

c) Exist an animal, if it is a rabbit, then it is a hops.

d) Exist an animal, it is a rabbit and a hops.

12.

a) Flase

b) True

c) Flase

d) True

e) Flase

f) True

g) Flase

16.

a) True

b) Flase

c) True

d) Flase

20.

a) $P(-5) \vee P(-3) \vee P(-1) \vee P(1) \vee P(3)$

b) $P(-5) \wedge P(-3) \wedge P(-1) \wedge P(1) \wedge P(3)$

c) $P(-5) \wedge P(-3) \wedge P(-1) \wedge P(3)$

d) $P(1) \vee P(3)$

e) $(\neg P(-5) \vee \neg P(-3) \vee \neg P(-1) \vee \neg P(1) \vee \neg P(3) \wedge P(-5) \wedge P(-3))$

28.

a) Let P(x) is the statement that 'x is in the correct place' where the domain consist everything,

$\exists x, \neg P(x)$

b) Let P(x) is the statement the 'x is in the correct place ' ,Q(x) is the statement that 'x is in excellent condition', where the domain consist all tools,

$\forall x, P(x) \wedge Q(x)$

c) Let P(x) is the statement the 'x is in the correct place ' ,Q(x) is the statement that 'x is in excellent condition', where the domain consist everything,

$\forall x, P(x) \wedge Q(x)$

d) Let P(x) is the statement the 'x is in the correct place ' ,Q(x) is the statement that 'x is in excellent condition', where the domain consist everything,

$\forall x, \neg P(x) \neg \wedge Q(x)$

b) Let P(x) is the statement the 'x is in the correct place ' ,Q(x) is the statement that 'x is in excellent condition', where the domain consist all tools,

$\exists x, \neg P(x) \wedge Q(x)$

36.

a) When $x = 0$ the statement is flase.

b) When $x = \sqrt{2}$ the statement is flase.

c) Whin $x = 0$ the syatement is flase.

42.

a) Let P(x) is the statement that 'x has access to an electronic mailbox' where the domain is all users

$\forall x, P(x)$

b) Let P(x) is the statement that 'The system mailbox can be accessed by x',Q(x)is the statement that the file system is locked' where the domain is all users,

$\forall x, (Q \rightarrow P(x))$

c) Let p is the statement that 'the firewall is in a diagnostic state', q is the statement that 'the proxy server is in a diagnostic'

$p \rightarrow q$

d) Lat p is the statement that 'the througtput is between 100 kbps and 500 kbps' q is the statement that ' the proxy server is not in diagnostic mode' and R(x) is x is functioning normally where the domain is all routes

$\exists x, ((p \wedge q) \rightarrow Q(x))$