Symbolization and Translation Exercises
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1. Symbolize each of the following English sentences:
   a. Some zebras are not mammals.
   b. Something is orange.
   c. All boxes are sturdy.
   d. Everything is blue.
   e. Some tigers are lions.
   f. Nothing is red.
   g. Something is not purple.
   h. No sores are gangrenous.

2. Translate the following symbolized expressions into English:
   a. Tk
   b. Dx
   c. (x)Cx
   d. (∃x)(Wx • Kx)
   e. Φx
   f. (∃x)Lx
   g. (x)(Ex ⊃ Fx)
   h. Mn
   i. (x)(Gx ⊃ ~Hx)
   j. (x)~Zx
   k. (∃x)Ox
   l. Φr
   m. (∃x)~Sx
   n. (∃x)(Tx • ~Bx)
Which of your translated propositions are true and which false? Which are neither true nor false?

3. Additional translations:

   a. \((x)Ax \supset (x)Bx\)
   b. \((x)Cx \supset (\exists x)Dx\)
   c. \((x)Ex \supset Fm\)
   d. \((\exists x)Gx \supset (x)Hx\)
   e. \((\exists x)Ix \supset (\exists x)Jx\)
   f. \((\exists x)Kx \supset Lt\)
   g. \(Me \supset (x)Nx\)
   h. \(Oe \supset (\exists x)Px\)
   i. \(Qe \supset Rf\)
   j. \([(x)Sx \cdot (\exists x)Tx] \supset Uk\)
   k. \((\exists x)Vx \lor (\exists x)Wx\)
   l. \((x)Xx \equiv \neg (\exists x)\neg Yx\)
   m. \((Zc \lor Ad) \supset (Za \lor Ag)\)
   n. \((x)(Bx \lor Cx)\)
   o. \((x)(Dx \lor Ex) \lor Fn\)
   p. \((\exists x)(Gx \cdot Hx) \supset (x)(Ix \supset \neg Jx)\)
   q. \((x)Kx \supset (x)(Kx \supset Lx)\)
   r. \((\exists x)Mx \lor (\exists x)(Nx \cdot \neg Ox)\)
   s. \([Px \lor (x)Qx] \supset [(\exists x)(Rx \cdot Sx) \equiv Ts]\)
   t. \(Us \cdot \neg (x)Vx\)
   u. \(Wr \supset (Xo \lor Yi)\)
   v. \((x)Zx \supset (\exists x)Zx\)