

Translating from Predicate Logic

Instructions: Use the given interpretations to translate the following arguments written in predicate logic into natural, English sentences.

Ax: "x is an athlete"

Bx: "x is brawny"

Cx: "x is a champion"

m: "Mary"

g: "Gail"

n: "Ned"

1. 1. $(\forall x)(Ax \supset Bx)$
 2. $Am \cdot An$ / $Bm \cdot Bn$

2. 1. $(\forall x)(Ax \supset Bx)$
 2. $(\forall x)(Bx \supset Cx)$ / $(\forall x)(Ax \supset Cx)$

3. 1. $(\forall x)(Bx \supset Cx)$
 2. $(\exists x)(Ax \cdot Bx)$ / $(\exists x)(Ax \cdot Cx)$

4. 1. $(\forall x)(Ax \supset Bx)$
 2. $\sim Bm$ / $(\exists x)\sim Ax$

5. 1. $(\forall x)[Ax \supset (Bx \vee Cx)]$
 2. $Ag \cdot \sim Bg$ / Cg

6. 1. $(\forall x)[(Ax \cdot Bx) \supset Cx]$
 2. $(\exists x)(Bx \cdot \sim Cx)$ / $(\exists x)\sim Ax$

7. 1. $(\exists x)Ax \supset (x)(Cx \supset Bx)$
 2. $(\exists x)(Ax \vee Bx)$
 3. $(\forall x)(Bx \supset Ax)$ / $(\forall x)(Cx \supset Ax)$