

Homework 6

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Question 1

- A) $\blacktriangle\blacktriangle\square\square$
- B) $\blacktriangle\blacksquare\blacksquare$
- C) $\blacktriangle\blacktriangle\blacktriangle$
- D) $\circ\blacktriangle\square$
- E) $\square\square\square\circ\circ$
- F) $\blacktriangle\blacktriangle\blacktriangle\square$
- G) $\triangle\blacksquare\blacksquare$
- H) $\blacksquare\blacksquare\triangle$
- I) Impossible since all triangles are not solid, there cannot exist an instance of a toy that is solid and a triangle.
- J) $\triangle\triangle\blacktriangle\blacksquare$

Question 2

- A) $\forall x E(x)$
- B) $\forall x P(x)$
- C) $\exists x N(x)$
- D) $\exists x E(x)$
- E) $\exists x F(x)$
- F) $\forall x (P(x) \rightarrow F(x))$
- G) $\exists x (E(x) \wedge F(x))$
- H) $\exists x (N(x) \wedge E(x))$
- I) $\forall x (F(x) \rightarrow E(x))$
- J) $\exists x (E(x) \wedge P(x))$
- K) $\forall x (E(x) \wedge P(x))$
- L) $\neg \exists x E(x)$
- M) $\forall x \neg N(x)$
- N) $\exists x \neg F(x)$