# 8.4.x. Exercise questions

1.  Analyze the following in as much detail as possible; analyze definite descriptions in two ways, using Russell's approach and using the description operator.

    a.  *Sam guessed the winning number.*

    b.  *The winner who spoke to Tom was well-known.*

    c.  *The winner, who spoke to Tom, was well-known.*

    d.  *Every number greater than one is greater than its (own) positive square root.*

2.  Synthesize idiomatic English sentences that express the propositions associated with the logical forms below using the intensional interpretations that follow them. You may use definite descriptions to express the sort of logical forms Russell's analysis produces.

    a.  (∃x: Oxs ∧ (∀y: ¬ y = x) ¬ Oys) Cx
        [C: λx (x *called*); O: λxy (x *owns* y); s: *Spot*]

    b.  Fj(Ιx (Hx ∧ Ex(Ιy Pyj)))
        [E: λxy (x *enlarged* y); F: λxy (x *found* y); H: λx (x *is a photographer*); P: λxy (x *is a picture of* y); j: *John*]