

Predicate Logic Phase 6 Tests

Test 1 : Simple Quantifiers

- (a) $\forall x: \mathbb{N} \bullet x > 0$
- (b) $\exists y: \mathbb{N} \bullet y = 0$
- (c) $\exists_1 z: \mathbb{N} \bullet z < 10$

Test 2 : Multi Variable Quantifiers

- (a) $\forall x, y: \mathbb{N} \bullet x > y$
- (b) $\exists a, b: \mathbb{N} \bullet a > 0 \wedge b > 0$
- (c) $\forall m, n, p: \mathbb{N} \bullet m \geq n \wedge n \geq p$

Test 3 : Nested Quantifiers

- (a) $\forall x: \mathbb{N} \bullet \exists y: \mathbb{N} \bullet x > y$
- (b) $\exists x: \mathbb{N} \bullet \forall y: \mathbb{N} \bullet x \leq y$