

Senior Test 5

Stellenbosch Camp 2017

Time: 4 hours

- 1.
- 2.
- 3.
- 4.
5. Let $f : \mathbb{N} \rightarrow \mathbb{N}$ be such that

$$(f(f(z)))f(wxf(yf(z))) = z^2 f(xf(y))f(w).$$

Prove that $f(n!) \geq n!$.

- 6.

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