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Patrick M Gilmer* (gilmer@math.lsu.edu). *Heegaard genus, cut number, weak p -congruence, and quantum invariants.*

Let $p = 2d + 1$ be a prime bigger than 3. We use quantum invariants to define an invariant of closed oriented 3-manifolds, j_p , which lies in the non-negative integers. We show that j_p is an invariant of weak p -congruence. Let $h(M)$ denote the Heegaard genus of a closed oriented 3-manifold M , and $c(M)$ denote its cut number. We show

$$0 \leq c(M) \leq \frac{j_p(M)}{d-1} \leq g(M).$$

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