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A digraph G is called primitive if for some positive integer k , there is a walk of length exactly k from each vertex u to each vertex v (possibly u again). If G is primitive, the smallest such k is called the exponent of G , denoted by $\exp(G)$. For any real number r , $0 < r < 1$, let $f(n, r)$ be the maximum number of arcs in a primitive digraph with n vertices having exponent greater than or equal to $r^2 n^2$. We show that $f(n, r)/n^2$ is asymptotically $(1 - r)^2/3$ whenever $r \geq \sqrt{2}/2$.

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