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We apply the Normal approximation

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$$P(W > 5000)$$

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$$P(W > 5000) \cong 1 - \Phi\left(\frac{5000 - 30 \cdot 150}{55\sqrt{30}}\right)$$



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$$P(W > 5000) \cong 1 - \Phi\left(\frac{5000 - 30 \cdot 150}{55\sqrt{30}}\right) = 1 - \Phi(1.66) = 0.0485$$