

**84.** A health plan implements an incentive to physicians to control hospitalization under which the physicians will be paid a bonus  $B$  equal to  $c$  times the amount by which total hospital claims are under 400 ( $0 \leq c \leq 1$ ).

The effect the incentive plan will have on underlying hospital claims is modeled by assuming that the new total hospital claims will follow a two-parameter Pareto distribution with  $\alpha = 2$  and  $\theta = 300$ .

$$E(B) = 100$$

Calculate  $c$ .

- (A) 0.44
- (B) 0.48
- (C) 0.52
- (D) 0.56
- (E) 0.60