8. (3 points each) Harry, Ron, and Hermione are all thrilled about their abundance of Bertie Bott's Every Flavor Beans; however, they prefer Chocolate Frogs to Bertie Bott's Beans. Luckily, at the wizard fair there is a booth where wizards are able to exchange Bertie Bott's Beans for Chocolate Frogs. The number of beans, N, needed to "purchase" F chocolate frogs is given by the function $N = C(F)$. Using *complete* sentences, give the practical interpretations of each of the following statements in the context of this problem.

(a) $C(3)$

$C(3)$ is the number of beans needed to purchase 3 chocolate frogs.

(b) $C'(3) = 18$

If you purchase 3 chocolate frogs, you need approximately 18 more beans to purchase an additional frog.

(c) $C^{-1}(91)$

$C^{-1}(91)$ is the number of chocolate frogs you'll receive for exchanging 91 beans.

(d) $(C^{-1})'(91) = 0.05$

If you exchange 91 beans for chocolate frogs, you'll get approximately $\dfrac{1}{20}$ of a chocolate frog by exchanging one more bean.

(e) $\int_4^{10} (C'(F))dF$

The expression $\displaystyle\int_4^{10} (C'(F))dF$ represents the difference between the number of beans needed to purchase 10 chocolate frogs and the number of beans needed to purchase 4 chocolate frogs–i.e., the additional beans needed to go from 4 to 10 frogs.