Question #126
Key: C

Let X be the loss random variable,
So $(X-5)_+$ is the claim random variable.

$$E(X)=\frac{10}{2.5-1}=6.\overline{6}$$

$$E(X\wedge 5)=\left(\frac{10}{2.5-1}\right)\left[1-\left(\frac{10}{5+10}\right)^{2.5-1}\right]$$

$$=3.038$$

$$E(X-5)_+=E(X)-E(X\wedge 5)$$

$$=6.\overline{6}-3.038$$

$$=3.629$$

Expected aggregate claims $=E(N)E(X-5)_+$

$$=(5)(3.629)$$

$$=18.15$$