

$$\mathbb{E} \left[\frac{5 e^2}{24} + \frac{5 e^4}{16} + \frac{1105 e^6}{1152} + \frac{565 e^8}{128} + \frac{82825 e^{10}}{3072} + \frac{19675 e^{12}}{96} \right]$$