2) 5 coin flip experiment with $p = p$

Toss 1 = T_1

$$T_1 = -p \log(p) - (1-p) \log(1-p)$$

Toss 2 = T_2

$$T_2 = T_1 + -p \log(p) - (1-p) \log(1-p)$$

$$T_2 = 2T_1$$

Toss 5 = T_5

$$\boxed{T_5 = 5(-p \log(p) - (1-p) \log(1-p))}$$