

$$14) P(H)=0.6, P(T)=0.4, n=10, k=7$$

$$P(x) = \binom{n}{k} p^k q^{(n-k)}$$

$$\binom{n}{k} = \frac{n!}{k!(n-k)!}$$

$$\binom{10}{7} = \frac{10!}{7! \times (10-7)!} = \frac{3628800}{5040 \times 6} = 120$$

$$p^k = 0.6^7 = 0.279936$$

$$(1-p)^{n-k} = 0.4^3 = 0.064$$

$$P(X=7) = 120 \times 0.279936 \times 0.064 = 3.359232$$

$$3.359232 \times 0.064 = 0.21499 \approx 0.215$$

$$\boxed{= 0.215}$$

$$\boxed{1 =}$$