Assignment 24

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24-2

(a)

If the coin is fair (as stated: $k = 0.5$), then the likelihood of the outcome $HHTTH$ would be

$$k^{\text{flips}} = 0.5^5 = 0.03125$$

(b)

If the coin is biased (as stated: $k = 0.55$, towards heads), then the likelihood of the outcome $HHTTH$ would be

$$k^{\text{num heads}} * 1 - k^{\text{num tails}} = 0.55^3 * 0.45^2 = 0.03369$$

(c)

General formula for P of any k:

$$P(k^3 \cdot (1-k)^2)) = k^3(1 - 2k + k^2) = k^3 - 2k^4 + k^5$$

(d)