

Miami Dice

Kobow Original · eInstant Cert Pack v1

Pollard analog: VIP Riches (K.A.R. 111-23-11) — key-number-match pattern

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Signing key: Ed25519 · ID d651f1b9f793f40d

Important regulatory note: This game is a **Kobow proprietary design** derived from the cited Pollard analog pattern. The paytable below is **synthesized to hit 88.0% RTP** with the regulator-aligned top prize. For state cert submission, the paytable may be reviewed/replaced with a regulator-specific table; this v1 cert pack establishes the operational architecture (RNG, audit chain, verifier surface) which is shared with all K.A.R.-anchored games in this catalog.

Math (synthesized 88% RTP)

Pool size	1,000,000
RTP @ unit denom	88.0000%
Top prize (max denom)	\$50,000
Bonus engine	dice_double

1. Paytable (12 tiers, synthesized)

Multiplier	Count in pool	Odds (1 in)
x10000	1	1,000,000.00
x1000	43	23,255.81
x250	174	5,747.13
x200	217	4,608.29
x100	696	1,436.78
x50	2,262	442.09
x25	3,480	287.36
x10	10,440	95.79
x5	20,880	47.89
x2	52,200	19.16
x1	87,000	11.49
x0.5	140,400	7.12

2. Bonus engine — dice_double

Key-number-match on 4-cell grid + 2 dice (range 1-12). DOUBLE-DIE (both dice equal) multiplies all wins by x5.

3. Pool architecture

Each pool consists of 1,000,000 shares. RGS service multibingo-rng:9443 (RNG_STRICT=true) provides the server seed. mulberry32(SHA-256(seed)) Fisher-Yates shuffle deterministically orders the payable counts. Tickets consumed sequentially; outcome = multiplier at position.

4. Audit chain

Daily Merkle root signed Ed25519 (key ID d651f1b9f793f40d), WORM-locked in PG, audit blob persisted with prev_root chain. Per K.A.R. (h) compliance pattern.

5. Verifier endpoints

```
GET /api/ilottery/games/MIAMI_DICE/paytable
POST /api/ilottery/games/MIAMI_DICE/open-pool
POST /api/ilottery/games/MIAMI_DICE/play
GET /api/ilottery/verify/:ticket_id
POST /api/ilottery/vector/replay
GET /api/ilottery/merkle/proof/:ticket_id
GET /api/ilottery/audit/public-key
```

6. Test vectors v1

URL: https://kobowlotto.com/mathforge/ilottery/gdd/miami_dice/vectors_v1.json
600 vectors x 5 denoms (10/25/50/100/500c) = 3,000 prize data points.

7. Operator Ed25519 public key

```
-----BEGIN PUBLIC KEY-----
MCowBQYDK2VwAyEAU2k0zXnm09QHduKLSEQYUAFeACAEOTUceEuiRGLSiXs=
-----END PUBLIC KEY-----
```