Math Masters Duel

Mission: the thief locked the mascot behind a math trap, and rushing won't crack it. Win the duels, solve the code on the whiteboard, whisper the number combo, open the box, free the mascot. Character trait today: **Responsible Decisions**.

1 · Flash Duel (5–16 min) — two players, first correct answer scores

TK–2 2 + 3 = 5 · 4 + 1 = 5 · 6 – 2 = 4 · 3 + 3 = 6 · 5 – 1 = 4 · 2 + 2 = 4 · 8 – 5 = 3 · 4 + 4 = 8 · 1 + 6 = 7 · 9 – 4 = 5 · 3 + 5 = 8 · 7 – 3 = 4.

Core 6 × 7 = 42 · 8 × 4 = 32 · 9 × 6 = 54 · 7 × 8 = 56 · 42 ÷ 6 = 7 · 56 ÷ 7 = 8 · 8 × 9 = 72 · 63 ÷ 9 = 7 · 11 × 5 = 55 · 12 × 3 = 36.

Two-step 6 × 4 + 5 = 29 · 7 × 3 – 4 = 17 · 8 × 5 + 2 = 42 · 9 × 2 + 6 = 24 · 5 × 6 – 8 = 22 · 12 ÷ 3 + 7 = 11 · 20 ÷ 4 × 3 = 15 · 6 + 7 × 2 = 20.

Diff TK–2: within-10 facts, slow, both right answers score, coach reads aloud. 3–8: two-step facts, best-of-5, students run the flashes and keep score on the board, ties go sudden-death.

2 · Build the Equation (16–31 min) — hit the target with +, –, ×, ÷

Set 1 target 12, numbers 2, 3, 4, 6. Quick: 3 × 4 = 12. All numbers: (6 – 4) × 3 × 2 = 12.

Set 2 target 24, numbers 3, 4, 6, 8. Quick: 4 × 6 = 24. All numbers: 3 × 4 × (8 – 6) = 24.

Set 3 target 10, numbers 1, 2, 4, 5. Quick: 5 × 2 = 10. All numbers: 5 × 4 ÷ 2 × 1 = 10.

Set 4 target 16, numbers 2, 4, 6, 8. Quick: 2 × 8 = 16. All numbers: (6 + 2) × 8 ÷ 4 = 16.

Diff TK–2: small target, 2–3 numbers, build one together, no clock. 3–8: use all numbers and at least two operations under a 60-second shot clock, students set targets and referee whether a rival's equation is legal.

3 · Crack the Number Code (31–45 min) — answers stack into the box combo

861 4 + 4 (= 8) / 3 × 2 (= 6) / 7 – 6 (= 1). Read top to bottom: 8, 6, 1.

258 1 + 1 (= 2) / 9 – 4 (= 5) / 2 × 4 (= 8). Read top to bottom: 2, 5, 8.

93517 2 × 3 + 3 = 9 / 12 ÷ 2 – 3 = 3 / 1 + 2 × 2 = 5 / 8 ÷ 2 – 3 = 1 / 3 × 3 – 2 = 7. Multiply and divide first. Fresh values, not Day 33, 39, or 43.

Diff TK–2: 2-digit code (e.g. 4 3 from "1 + 3" and "5 – 2"), a blank line per digit, coach helps. 3–8: 5-digit order-of-operations code on a timer with a 20-sec wrong-guess lockout, then teams write a code for a rival and referee it (prove your own key first).

4 · Finale + Wristband (45–60 min)

Open Winning team announces the number code to the room, coach turns the key, mascot lifts out, big cheer. Optional "thief's note" inside: "You out-calculated my code. I surrender!"

Award the **Responsible Decisions** trait wristband to detectives who checked their work and chose their answer on purpose ("I made sure first", "I picked the answer on purpose").

3–8 For older kids and the two middle schools, run the whole hour competitive: fixed teams, score every game on the whiteboard, visible timer each round, crown a champion here. Games bank adds **Detective Mafia** (2–3 Culprits + a Detective, 5–7 min rounds) — the one middle schoolers ask to replay.

Detective's Oath (say together, magnifiers up): I am a detective. / My brain is my best tool. / I don't guess, I reason. / I follow the clues to the truth.