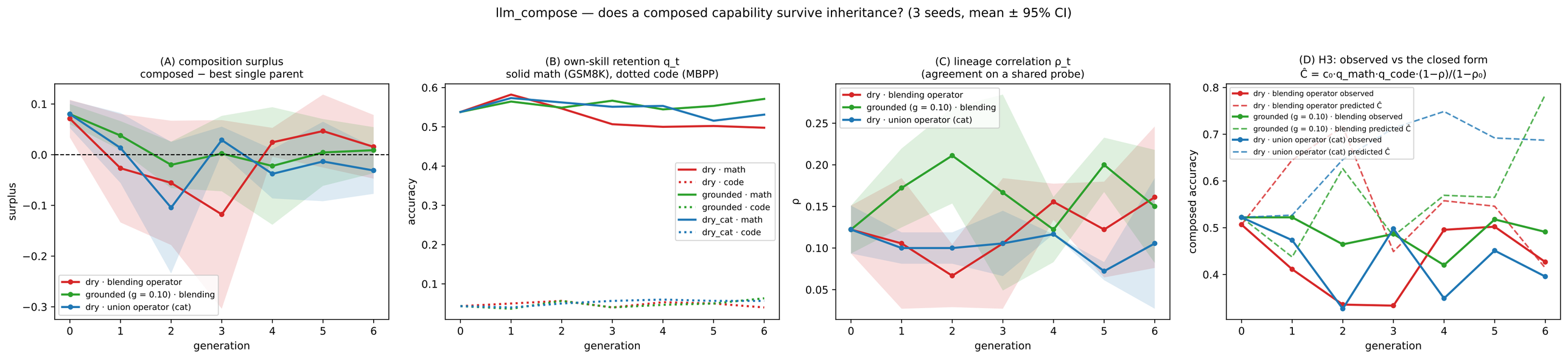
llm_compose — does a composed capability survive inheritance? (3 seeds, mean ± 95% CI)
(A) composition surplus
composed − best single parent
surplus
generation
dry · blending operator
grounded (g = 0.10) · blending
dry · union operator (cat)
(B) own-skill retention q_t
solid math (GSM8K), dotted code (MBPP)
accuracy
generation
dry · math
dry · code
grounded · math
grounded · code
dry_cat · math
dry_cat · code
(C) lineage correlation ρ_t
(agreement on a shared probe)
ρ
generation
dry · blending operator
grounded (g = 0.10) · blending
dry · union operator (cat)
(D) H3: observed vs the closed form
Ĉ = c₀·q_math·q_code·(1−ρ)/(1−ρ₀)
composed accuracy
generation
dry · blending operator observed
dry · blending operator predicted Ĉ
grounded (g = 0.10) · blending observed
grounded (g = 0.10) · blending predicted Ĉ
dry · union operator (cat) observed
dry · union operator (cat) predicted Ĉ