LaTeX-Moodle Quiz

1. **Old-skool MCQ**

   Time is finite and indexed by $t \in \{0, 1, ..., T\}$. Let the optimal value of a policy maker beginning with resources k_0 be given by: $V_0(k_0) = \max_{\{c_t, k_{t+1}\}_{t=0}^{T}} \sum_{t=0}^{T} \beta^t (c_t)^\alpha$ subject to the constraints: $k_{t+1} = \min\{k_t, 1\} - c_t$, $0 \leq c_t \leq \min\{k_t, 1\}$, and, $k_{T+1} \geq 0$, where $\alpha \in (0, 1)$; and $k = K/L$ and c, respectively, refer to per-worker capital stock and consumption. The state space $X \ni k_t$ is bounded.
   Describe precisely what we mean by a strategy in this setting.

   (a) A strategy is a date and state contingent plan $\{g_t(k_t)\}_{t=0}^{T}$ such that $c_t = g_t(k_t)$ at each date t and state k_t. ✓
   (b) A strategy is an optimal date and state contingent plan $\{g_t(k_t)\}_{t=0}^{T}$ such that $c_t = g_t(k_t)$ at each date t and state k_t.
   (c) A strategy is the optimal date and state contingent plan $\{g_t(k_t)\}_{t=0}^{T}$ such that $c_t = g_t(k_t)$ at each date t and state k_t.
   (d) A strategy is a policy selection $c_t = g_t(k_t)$ at each date t and state k_t.

2. **Numerical**

   The approximate the value of $\sqrt{2}$ is

   - 1.4142 ± 0.01 ✓
   - 0.70711 ± 0.01 (20%)
   - $* \pm 0.01$ (0%)
   - 2.5 ± 0.01 (0%)

3. **A Cloze type question**

   Thanks to calculus, invented by Isaac [Newton ✓], we know that the indefinite integral of x^2 is (Case-Sensitive)

   • This one $2x$ • This one $3x$ ✓ • This one 0

   and that $\int_0^2 x^2 dx$ equals [2.667 ± 0.001 ✓]. Thanks, Isaac!

4. **Another Cloze type with in-line MCQ**

   "Hello, Goodbye" was a song by: [The Beatles ✓]. (Case-Sensitive)
   They were high on

   • marijuana • LSD ✓ • speed • Molly

   It was recorded in [EMI Studio ✓] in the city of (Case-Sensitive)

   - Birmingham
   - London ✓
   - Liverpool
   - Edinburgh

5. **Short answer**

   Newton's rival was Gottfried Wilhelm _____

   - Leibniz (90%)
   - Leibniz. ✓
   - leibniz (70%)
   - leibniz. (80%)

6. **Essay, Examiner notes**

   Let $\beta \in (0, 1)$ and $\phi := \phi_t$.

   Prove that this monetary equilibrium $\phi = \beta\phi_{+1}$ is unique.

   Show here:

   Notes: (not included in XML)

   - Use contraction mapping
   - To show contraction, use Blackwell
   - Show solution space is complete ms

7. **Arithmetic Quiz (3, 2)**

   Solve the following tasks!

   $3 + 2 =$ 5 ✓

   $3 - 2 =$ 1 ✓

   $3 \cdot 2 =$ 6 ✓

8. **Arithmetic Quiz (4, 2)**

   Solve the following tasks!

   $4 + 2 =$ 6 ✓

   $4 - 2 =$ 2 ✓

   $4 \cdot 2 =$ 8 ✓

   $4 : 2 =$ 2 ✓

9. **Arithmetic Quiz (4, 3)**

   Solve the following tasks!

   $4 + 3 =$ 7 ✓

   $4 - 3 =$ 1 ✓

   $4 \cdot 3 =$ 12 ✓

10. **Arithmetic Quiz (5, 2)**

    Solve the following tasks!

    $5 + 2 =$ 7 ✓

$5 - 2 =$ 3 ✓

$5 \cdot 2 =$ 10 ✓

11. **Arithmetic Quiz (5, 3)**

    Solve the following tasks!

    $5 + 3 =$ 8 ✓

    $5 - 3 =$ 2 ✓

    $5 \cdot 3 =$ 15 ✓

12. **Arithmetic Quiz (5, 4)**

    Solve the following tasks!

    $5 + 4 =$ 9 ✓

    $5 - 4 =$ 1 ✓

    $5 \cdot 4 =$ 20 ✓

13. **Arithmetic Quiz (6, 2)**

    Solve the following tasks!

    $6 + 2 =$ 8 ✓

    $6 - 2 =$ 4 ✓

    $6 \cdot 2 =$ 12 ✓

    $6 : 2 =$ 3 ✓

14. **Arithmetic Quiz (6, 3)**

    Solve the following tasks!

    $6 + 3 =$ 9 ✓

    $6 - 3 =$ 3 ✓

    $6 \cdot 3 =$ 18 ✓

    $6 : 3 =$ 2 ✓

15. **Arithmetic Quiz (6, 4)**

    Solve the following tasks!

    $6 + 4 =$ 10 ✓

    $6 - 4 =$ 2 ✓

    $6 \cdot 4 =$ 24 ✓

16. **Arithmetic Quiz (6, 5)**

Solve the following tasks!

$6 + 5 =$ 11 ✓

$6 - 5 =$ 1 ✓

$6 \cdot 5 =$ 30 ✓

17. **Arithmetic Quiz (7, 2)**

Solve the following tasks!

$7 + 2 =$ 9 ✓

$7 - 2 =$ 5 ✓

$7 \cdot 2 =$ 14 ✓

18. **Arithmetic Quiz (7, 3)**

Solve the following tasks!

$7 + 3 =$ 10 ✓

$7 - 3 =$ 4 ✓

$7 \cdot 3 =$ 21 ✓

19. **Arithmetic Quiz (7, 4)**

Solve the following tasks!

$7 + 4 =$ 11 ✓

$7 - 4 =$ 3 ✓

$7 \cdot 4 =$ 28 ✓

20. **Arithmetic Quiz (7, 5)**

Solve the following tasks!

$7 + 5 =$ 12 ✓

$7 - 5 =$ 2 ✓

$7 \cdot 5 =$ 35 ✓

21. **Arithmetic Quiz (7, 6)**

Solve the following tasks!

$7 + 6 =$ 13 ✓

$7 - 6 =$ 1 ✓

$7 \cdot 6 =$ 42 ✓

22. **Arithmetic Quiz (8, 2)**

Solve the following tasks!

$8 + 2 =$ 10 ✓

$8 - 2 =$ 6 ✓

$8 \cdot 2 =$ 16 ✓

$8 : 2 =$ 4 ✓

23. **Arithmetic Quiz (8, 3)**

Solve the following tasks!

$8 + 3 =$ 11 ✓

$8 - 3 =$ 5 ✓

$8 \cdot 3 =$ 24 ✓

24. **Arithmetic Quiz (8, 4)**

Solve the following tasks!

$8 + 4 =$ 12 ✓

$8 - 4 =$ 4 ✓

$8 \cdot 4 =$ 32 ✓

$8 : 4 =$ 2 ✓

25. **Arithmetic Quiz (8, 5)**

Solve the following tasks!

$8 + 5 =$ 13 ✓

$8 - 5 =$ 3 ✓

$8 \cdot 5 =$ 40 ✓

26. **Arithmetic Quiz (8, 6)**

Solve the following tasks!

$8 + 6 =$ 14 ✓

$8 - 6 =$ 2 ✓

$8 \cdot 6 =$ 48 ✓

27. **Arithmetic Quiz (8, 7)**

Solve the following tasks!

$8 + 7 =$ 15 ✓

$8 - 7 =$ 1 ✓

$8 \cdot 7 =$ 56 ✓

28. **Arithmetic Quiz (9, 2)**

Solve the following tasks!

$9 + 2 =$ 11 ✓

$9 - 2 =$ 7 ✓

$9 \cdot 2 =$ 18 ✓

29. **Arithmetic Quiz (9, 3)**

Solve the following tasks!

$9 + 3 =$ 12 ✓

$9 - 3 =$ 6 ✓

$9 \cdot 3 =$ 27 ✓

$9 : 3 =$ 3 ✓

30. **Arithmetic Quiz (9, 4)**

Solve the following tasks!

$9 + 4 =$ 13 ✓

$9 - 4 =$ 5 ✓

$9 \cdot 4 =$ 36 ✓

31. **Arithmetic Quiz (9, 5)**

Solve the following tasks!

$9 + 5 =$ 14 ✓

$9 - 5 =$ 4 ✓

$9 \cdot 5 =$ 45 ✓

32. **Arithmetic Quiz (9, 6)**

Solve the following tasks!

$9 + 6 =$ 15 ✓

$9 - 6 =$ 3 ✓

$9 \cdot 6 =$ 54 ✓

33. **Arithmetic Quiz (9, 7)**

Solve the following tasks!

$9 + 7 =$ 16 ✓

$9 - 7 =$ 2 ✓

$9 \cdot 7 =$ 63 ✓

34. **Arithmetic Quiz (9, 8)**

Solve the following tasks!

$9 + 8 =$ 17 ✓

$9 - 8 =$ 1 ✓

$9 \cdot 8 =$ 72 ✓