

UK 11+ Exam Rapid-Recall Arithmetic Tests (Set 1)

Introduction

Rapid recall of key number facts is essential for success in 11+ mathematics examinations. This guide provides 10 structured tests designed to build speed and accuracy with fundamental arithmetic skills. Each test focuses on Key Instant Recall Facts (KIRFs) that underpin mathematical fluency and confidence.

These tests are specifically designed for GL Assessment and CEM 11+ preparation, incorporating the rapid-fire format commonly used in entrance examinations. Regular practice with these tests will help students develop the instant recall necessary for success under timed conditions.

How to Use This Guide

Each test should be completed within 2-3 minutes, depending on the student's current ability level. The tests are progressively challenging, starting with fundamental number bonds and advancing to more complex calculations involving decimals and percentages.

Essential Guidelines:

- Complete tests in order from Test 1 to Test 10
- Use a timer to maintain rapid-recall conditions
- Record scores in the progress chart
- Repeat tests weekly to maintain fluency
- Focus on accuracy first, then speed

Test Instructions

Timing: Allow 2 minutes for Tests 1-5, and 3 minutes for Tests 6-10.

Materials: Pencil and timer only. No calculators permitted.

Scoring: Each correct answer scores 1 point. Record your score in the box provided.

Target Scores: Aim for 80% accuracy (16/20 for shorter tests, 20/25 for longer tests).

Test 1: Number Bonds to 10 and 20

Time Limit: 2 minutes | Target: 16/20 correct

1. $6 + 4 =$ ____

2. $8 + 2 =$ ____

3. $10 - 3 =$ ____

4. $10 - 8 =$ ____

5. $5 + 5 =$ ____

6. $9 + 1 =$ ____

7. $10 - 6 =$ ____

8. $7 + 3 =$ ____

9. $15 + 5 =$ ____

10. $12 + 8 =$ ____

11. $20 - 7 =$ ____

12. $20 - 15 =$ ____

13. $11 + 9 =$ ____

14. $14 + 6 =$ ____

15. $20 - 4 =$ ____

16. $20 - 12 =$ ____

17. $13 + 7 =$ ____

18. $16 + 4 =$ ____

19. $20 - 9 =$ ____

20. $20 - 3 =$ ____

Score: ____/20 | Date: _____ | Time: _____

Test 2: Times Tables 2, 5, 10

Time Limit: 2 minutes | Target: 16/20 correct

1. $2 \times 6 =$ ____

2. $5 \times 4 =$ ____

3. $10 \times 3 =$ ____

4. $2 \times 9 =$ ____

5. $5 \times 7 =$ ____

6. $10 \times 8 =$ ____

7. $2 \times 12 =$ ____

8. $5 \times 9 =$ ____

9. $10 \times 6 =$ ____

10. $2 \times 8 =$ ____

11. $5 \times 6 =$ ____

12. $10 \times 11 =$ ____

13. $2 \times 7 =$ ____

14. $5 \times 8 =$ ____

15. $10 \times 5 =$ ____

16. $2 \times 11 =$ ____

17. $5 \times 12 =$ ____

18. $10 \times 7 =$ ____

19. $2 \times 5 =$ ____

20. $5 \times 11 =$ ____

Score: ____/20 | Date: _____ | Time: _____

Test 3: Mixed Times Tables 3, 4, 6

Time Limit: 2 minutes | Target: 16/20 correct

1. $3 \times 7 =$ ____

2. $4 \times 6 =$ ____

3. $6 \times 5 =$ ____

4. $3 \times 9 =$ ____

5. $4 \times 8 =$ ____

6. $6 \times 7 =$ ____

7. $3 \times 12 =$ ____

8. $4 \times 9 =$ ____

9. $6 \times 8 =$ ____

10. $3 \times 8 =$ ____

11. $4 \times 7 =$ ____

12. $6 \times 9 =$ ____

13. $3 \times 6 =$ ____

14. $4 \times 11 =$ ____

15. $6 \times 6 =$ ____

16. $3 \times 11 =$ ____

17. $4 \times 12 =$ ____

18. $6 \times 11 =$ ____

19. $3 \times 4 =$ ____

20. $6 \times 12 =$ ____

Score: ____/20 | Date: _____ | Time: _____

Test 4: Division Facts and Number Bonds to 100

Time Limit: 2 minutes | Target: 16/20 correct

1. $24 \div 6 = \underline{\quad}$

2. $70 + 30 = \underline{\quad}$

3. $35 \div 5 = \underline{\quad}$

4. $60 + 40 = \underline{\quad}$

5. $48 \div 8 = \underline{\quad}$

6. $90 + 10 = \underline{\quad}$

7. $42 \div 7 = \underline{\quad}$

8. $100 - 25 = \underline{\quad}$

9. $36 \div 9 = \underline{\quad}$

10. $100 - 45 = \underline{\quad}$

11. $54 \div 6 = \underline{\quad}$

12. $35 + 65 = \underline{\quad}$

13. $63 \div 9 = \underline{\quad}$

14. $100 - 37 = \underline{\quad}$

15. $72 \div 8 = \underline{\quad}$

16. $28 + 72 = \underline{\quad}$

17. $56 \div 7 = \underline{\quad}$

18. $100 - 56 = \underline{\quad}$

19. $81 \div 9 = \underline{\quad}$

20. $43 + 57 = \underline{\quad}$

Score: /20 | Date: | Time:

Test 5: Times Tables 7, 8, 9

Time Limit: 2 minutes | Target: 16/20 correct

1. $7 \times 8 = \underline{\quad}$

2. $8 \times 6 = \underline{\quad}$

3. $9 \times 7 = \underline{\quad}$

4. $7 \times 9 = \underline{\quad}$

5. $8 \times 9 = \underline{\quad}$

6. $9 \times 8 = \underline{\quad}$

7. $7 \times 6 = \underline{\quad}$

8. $8 \times 7 = \underline{\quad}$

9. $9 \times 6 = \underline{\quad}$

10. $7 \times 11 = \underline{\quad}$

11. $8 \times 11 = \underline{\quad}$

12. $9 \times 11 = \underline{\quad}$

13. $7 \times 12 = \underline{\quad}$

14. $8 \times 12 = \underline{\quad}$

15. $9 \times 12 = \underline{\quad}$

16. $7 \times 7 = \underline{\quad}$

17. $8 \times 8 = \underline{\quad}$

18. $9 \times 9 = \underline{\quad}$

19. $7 \times 4 = \underline{\quad}$

20. $8 \times 5 = \underline{\quad}$

Score: /20 | Date: | Time:

Test 6: Square Numbers and Doubling/Halving

Time Limit: 3 minutes | Target: 20/25 correct

1. $6^2 =$ ____

2. Double 25 = ____

3. $8^2 =$ ____

4. Half of 34 = ____

5. $9^2 =$ ____

6. Double 35 = ____

7. $7^2 =$ ____

8. Half of 86 = ____

9. $11^2 =$ ____

10. Double 45 = ____

11. $12^2 =$ ____

12. Half of 74 = ____

13. $5^2 =$ ____

14. Double 55 = ____

15. $10^2 =$ ____

16. Half of 98 = ____

17. $4^2 =$ ____

18. Double 65 = ____

19. $13^2 =$ ____

20. Half of 126 = ____

21. $14^2 =$ ____

22. Double 85 = ____

23. $15^2 =$ ____

24. Half of 154 = ____

25. $3^2 =$ ____

Score: ____/25 | Date: _____ | Time: _____

Test 7: Number Bonds to 1000 and Mixed Operations

Time Limit: 3 minutes | Target: 20/25 correct

1. $300 + 700 =$ ____

2. $11 \times 11 =$ ____

3. $1000 - 450 =$ ____

4. $144 \div 12 =$ ____

5. $600 + 400 =$ ____

6. $12 \times 12 =$ ____

7. $1000 - 275 =$ ____

8. $132 \div 11 =$ ____

9. $250 + 750 =$ ____

10. $11 \times 8 =$ ____

11. $1000 - 368 =$ ____

12. $99 \div 11 =$ ____

13. $450 + 550 =$ ____

14. $12 \times 9 =$ ____

15. $1000 - 635 =$ ____

16. $96 \div 12 =$ ____

17. $350 + 650 =$ ____

18. $11 \times 6 =$ ____

19. $1000 - 485 =$ ____

20. $84 \div 12 =$ ____

21. $125 + 875 =$ ____

22. $12 \times 7 =$ ____

23. $1000 - 295 =$ ____

24. $121 \div 11 =$ ____

25. $375 + 625 =$ ____

Score: ____/25 | Date: _____ | Time: _____

Test 8: Basic Fraction and Decimal Equivalents

Time Limit: 3 minutes | Target: 20/25 correct

1. $\frac{1}{2} = 0.\underline{\hspace{1cm}}$
2. $\frac{1}{4} = 0.\underline{\hspace{1cm}}$
3. $\frac{3}{4} = 0.\underline{\hspace{1cm}}$
4. $\frac{1}{10} = 0.\underline{\hspace{1cm}}$
5. $\frac{3}{10} = 0.\underline{\hspace{1cm}}$
6. $\frac{1}{5} = 0.\underline{\hspace{1cm}}$
7. $\frac{2}{5} = 0.\underline{\hspace{1cm}}$
8. $\frac{3}{5} = 0.\underline{\hspace{1cm}}$
9. $\frac{4}{5} = 0.\underline{\hspace{1cm}}$
10. $\frac{7}{10} = 0.\underline{\hspace{1cm}}$
11. $\frac{9}{10} = 0.\underline{\hspace{1cm}}$
12. $0.5 = \underline{\hspace{1cm}}/10$
13. $0.25 = \underline{\hspace{1cm}}/100$
14. $0.75 = \underline{\hspace{1cm}}/100$
15. $0.1 = \underline{\hspace{1cm}}/10$
16. $0.3 = \underline{\hspace{1cm}}/10$
17. $0.2 = \underline{\hspace{1cm}}/5$
18. $0.4 = \underline{\hspace{1cm}}/5$
19. $0.6 = \underline{\hspace{1cm}}/5$
20. $0.8 = \underline{\hspace{1cm}}/5$
21. $0.7 = \underline{\hspace{1cm}}/10$
22. $0.9 = \underline{\hspace{1cm}}/10$
23. $\frac{1}{8} = 0.\underline{\hspace{1cm}}$
24. $\frac{3}{8} = 0.\underline{\hspace{1cm}}$
25. $\frac{5}{8} = 0.\underline{\hspace{1cm}}$

Score: $\underline{\hspace{1cm}}/25$ | Date: $\underline{\hspace{2cm}}$ | Time: $\underline{\hspace{2cm}}$

Test 9: Percentage Equivalents

Time Limit: 3 minutes | Target: 20/25 correct

1. $\frac{1}{2} = \underline{\hspace{1cm}}\%$
2. $\frac{1}{4} = \underline{\hspace{1cm}}\%$
3. $\frac{3}{4} = \underline{\hspace{1cm}}\%$
4. $\frac{1}{10} = \underline{\hspace{1cm}}\%$
5. $\frac{3}{10} = \underline{\hspace{1cm}}\%$
6. $\frac{1}{5} = \underline{\hspace{1cm}}\%$
7. $\frac{2}{5} = \underline{\hspace{1cm}}\%$
8. $\frac{3}{5} = \underline{\hspace{1cm}}\%$
9. $\frac{4}{5} = \underline{\hspace{1cm}}\%$
10. $50\% = \underline{\hspace{1cm}}/100$
11. $25\% = \underline{\hspace{1cm}}/100$
12. $75\% = \underline{\hspace{1cm}}/100$
13. $10\% = \underline{\hspace{1cm}}/100$
14. $30\% = \underline{\hspace{1cm}}/100$
15. $20\% = \underline{\hspace{1cm}}/100$
16. $40\% = \underline{\hspace{1cm}}/100$
17. $60\% = \underline{\hspace{1cm}}/100$
18. $80\% = \underline{\hspace{1cm}}/100$
19. $70\% = \underline{\hspace{1cm}}/100$
20. $90\% = \underline{\hspace{1cm}}/100$
21. $1\% = 0.\underline{\hspace{1cm}}$
22. $5\% = 0.\underline{\hspace{1cm}}$
23. $15\% = 0.\underline{\hspace{1cm}}$
24. $35\% = 0.\underline{\hspace{1cm}}$
25. $95\% = 0.\underline{\hspace{1cm}}$

Score: $\underline{\hspace{1cm}}/25$ | Date: $\underline{\hspace{2cm}}$ | Time: $\underline{\hspace{2cm}}$

Test 10: Advanced Mixed Calculations

Time Limit: 3 minutes | Target: 20/25 correct

1. $0.5 \times 8 =$ ____	2. 25% of 80 = ____	3. $1.5 \times 6 =$ ____	4. 10% of 90 = ____
5. $0.25 \times 12 =$ ____	6. 50% of 46 = ____	7. $2.5 \times 4 =$ ____	8. 75% of 40 = ____
9. $0.75 \times 8 =$ ____	10. 20% of 65 = ____	11. $1.25 \times 8 =$ ____	12. 80% of 35 = ____
13. $0.2 \times 15 =$ ____	14. 60% of 25 = ____	15. $3.5 \times 2 =$ ____	16. 90% of 20 = ____
17. $0.125 \times 8 =$ ____	18. 30% of 70 = ____	19. $4.5 \times 2 =$ ____	20. 40% of 55 = ____
21. $0.6 \times 5 =$ ____	22. 15% of 80 = ____	23. $2.25 \times 4 =$ ____	24. 85% of 20 = ____
25. $0.8 \times 7 =$ ____			

Score: ____/25 | Date: _____ | Time: _____

Answer Keys

Test 1 Answers: Number Bonds to 10 and 20

1. 10	2. 10	3. 7	4. 2	5. 10	6. 10	7. 4	8. 10
9. 20	10. 20	11. 13	12. 5	13. 20	14. 20	15. 16	16. 8
17. 20	18. 20	19. 11	20. 17				

Test 2 Answers: Times Tables 2, 5, 10

1. 12	2. 20	3. 30	4. 18	5. 35	6. 80	7. 24	8. 45
9. 60	10. 16	11. 30	12. 110	13. 14	14. 40	15. 50	16. 22
17. 60	18. 70	19. 10	20. 55				

Test 3 Answers: Mixed Times Tables 3, 4, 6

1. 21	2. 24	3. 30	4. 27	5. 32	6. 42	7. 36	8. 36
9. 48	10. 24	11. 28	12. 54	13. 18	14. 44	15. 36	16. 33
17. 48	18. 66	19. 12	20. 72				

Test 4 Answers: Division Facts and Number Bonds to 100

1. 4	2. 100	3. 7	4. 100	5. 6	6. 100	7. 6	8. 75
9. 4	10. 55	11. 9	12. 100	13. 7	14. 63	15. 9	16. 100
17. 8	18. 44	19. 9	20. 100				

Test 5 Answers: Times Tables 7, 8, 9

1. 56	2. 48	3. 63	4. 63	5. 72	6. 72	7. 42	8. 56
9. 54	10. 77	11. 88	12. 99	13. 84	14. 96	15. 108	16. 49
17. 64	18. 81	19. 28	20. 40				

Test 6 Answers: Square Numbers and Doubling/Halving

1. 36	2. 50	3. 64	4. 17	5. 81	6. 70	7. 49	8. 43
9. 121	10. 90	11. 144	12. 37	13. 25	14. 110	15. 100	16. 49
17. 16	18. 130	19. 169	20. 63	21. 196	22. 170	23. 225	24. 77
25. 9							

Test 7 Answers: Number Bonds to 1000 and Mixed Operations

1. 1000	2. 121	3. 550	4. 12	5. 1000	6. 144	7. 725	8. 12
9. 1000	10. 88	11. 632	12. 9	13. 1000	14. 108	15. 365	16. 8
17. 1000	18. 66	19. 515	20. 7	21. 1000	22. 84	23. 705	24. 11
25. 1000							

Test 8 Answers: Basic Fraction and Decimal Equivalents

1. 5	2. 25	3. 75	4. 1	5. 3	6. 2	7. 4	8. 6
9. 8	10. 7	11. 9	12. 5	13. 25	14. 75	15. 1	16. 3
17. 1	18. 2	19. 3	20. 4	21. 7	22. 9	23. 125	24. 375
25. 625							

Test 9 Answers: Percentage Equivalents

1. 50	2. 25	3. 75	4. 10	5. 30	6. 20	7. 40	8. 60
9. 80	10. 50	11. 25	12. 75	13. 10	14. 30	15. 20	16. 40
17. 60	18. 80	19. 70	20. 90	21. 01	22. 05	23. 15	24. 35
25. 95							

Test 10 Answers: Advanced Mixed Calculations

1. 4	2. 20	3. 9	4. 9	5. 3	6. 23	7. 10	8. 30
9. 6	10. 13	11. 10	12. 28	13. 3	14. 15	15. 7	16. 18
17. 1	18. 21	19. 9	20. 22	21. 3	22. 12	23. 9	24. 17
25. 5.6							

Progress Tracking Chart

Record your scores and track improvement over time. Aim to achieve consistent scores of 80% or higher before moving to the next level.

[illegible]

Test 1	___/20	___/20	___/20	___/20	___/20	___/20	___/20	___/20	___/20	___/20
Test 2	___/20	___/20	___/20	___/20	___/20	___/20	___/20	___/20	___/20	___/20
Test 3	___/20	___/20	___/20	___/20	___/20	___/20	___/20	___/20	___/20	___/20
Test 4	___/20	___/20	___/20	___/20	___/20	___/20	___/20	___/20	___/20	___/20
Test 5	___/20	___/20	___/20	___/20	___/20	___/20	___/20	___/20	___/20	___/20
Test 6	___/25	___/25	___/25	___/25	___/25	___/25	___/25	___/25	___/25	___/25
Test 7	___/25	___/25	___/25	___/25	___/25	___/25	___/25	___/25	___/25	___/25
Test 8	___/25	___/25	___/25	___/25	___/25	___/25	___/25	___/25	___/25	___/25
Test 9	___/25	___/25	___/25	___/25	___/25	___/25	___/25	___/25	___/25	___/25
Test 10	___/25	___/25	___/25	___/25	___/25	___/25	___/25	___/25	___/25	___/25

Study Tips and Strategies

Maximising Rapid Recall Development:

- **Little and Often:** Practice for 5-10 minutes daily rather than long sessions
- **Speed Building:** Start with accuracy, then gradually increase speed
- **Pattern Recognition:** Look for number patterns and relationships
- **Mental Strategies:** Use doubling, halving, and compensation methods
- **Regular Review:** Revisit earlier tests to maintain fluency

Next Steps

Once you have achieved consistent scores of 80% or higher on all tests in this set, you are ready to progress to Set 2, which introduces more complex calculations and higher-level number relationships.

For additional practice, consider using online resources such as "Hit the Button" for times tables practice and number bond games to reinforce these essential skills.

Parent and Teacher Notes

These tests are designed to be used as regular assessment tools to monitor progress in rapid recall of key number facts. The progressive difficulty ensures that students build confidence whilst being appropriately challenged.

Students should be encouraged to verbalise their thinking when practising, as this helps identify which mental strategies they are using and highlights areas for further development.

Remember: The goal is not just speed, but confident, accurate recall that will support all areas of mathematical learning.