



# Mental Math

## Instructions (U-10) - created by Rohan Rao

### Instructions

1. There will be 40 (Algebra) + 20 (IQ) questions, each question worth 1 point. Duration of test is 30 minutes.
2. You may use pen or/and pencil for solving.
3. External help of any kind is NOT permitted.

Sample	Answer
2, 4, 6, 8, ?	
$14 + 25$	
$98 - 39$	
7, 9, 12, 16, 21, ?	
$25 - 4$	
$88 - 45$	
98, 95, 92, ?, 86	
$9 - 34$	
34, 45, 56, ?	
$23 - 54 + 99$	
$77 - 88 + 11$	
$222 - 444 + 555$	
$34 + 43 + 343$	
0, 3, 2, 5, 4, 7, ?	
23, 232, 24, 242, ?, 252	
$4 \times 12$	
$11 \times 0$	
$7 \times 2$	
$7 \times 8$	
$32 \times 5$	
96, 48, ?, 12, 6	
$68 \div 4$	
$98 \div 2$	
$13 \times 6 + 8 - 17$	
102, 111, ?, 129, 138	
$121 \div 11 + 12 - 0$	
$6 \times 0 \times 89 + 1$	
$22 \div 2 - 1 + 1$	
$0 \div 8 - 4 + 3$	
$48 \div 6 + 1 - 7$	
0, 1, 1, 2, 3, 5, 8, 11, ?	
$12 \div 3 + 4 - 6 + 10 - 2 + 6$	
$63 \div 9 + 23 - 76 + 2$	
17, 21, 27, ?, 45	
$22 + 44 + 66 + 88 - 33 - 55 - 77 - 99 + 11$	
$64 \div 8 - 5 + 10 - 2$	
$41 + 41 + 42 + 43 - 6 + 5 - 11 + 43 - 2$	
147, 256, 365, ?	
$2 \times 32 - 5 + 7 - 19$	
101, 292, ?, 474, 565	
243, 81, ?, 9	
$45 + 56 + 67 + 78 + 89 - 12 - 23 - 34 - 45$	
$11 + 22 + 33 + 44 + 55 + 66 + 77 + 88 - 99$	
256, ?, 16, 4, 1	

# Instructions (U-12)

- created by Rohan Rao

## Instructions

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2. You may use pen or/and pencil for solving.
3. External help of any kind is NOT permitted.
4. All equations follow BODMAS rule.
5. Some answers may be in decimals. Please do not write answers in fractions.



# Instructions (U-15)

- created by Rohan Rao

## Instructions

1. There will be 40 (Algebra) + 20 (IQ) questions, each question worth 1 point. Duration of test is 30 minutes.
2. You may use pen or/and pencil for solving.
3. External help of any kind is NOT permitted.
4. All equations follow BODMAS rule.
5. Some answers may be in decimals. Please do not write answers in fractions.

Sample	Answer
2013 + 3102	
31 - 19.3	
3.4 + 7.9	
1, 8, 27, ?, 125	
$\sqrt{79.9 + 1.1} - 81.1$	
3 - 43 + 50.7	
25 + 2.4 - 6.3	
11.1 + 12.2 - 13.3	
48, 72, 108, ?	
32 - 12.0 + 42.2	
$3^2 - \sqrt{256} + 1$	
8.8 × 0.5	
75% of 75	
3.3 ÷ 11	
60% of 0.6	
1.9, 2.8, ?, 4.6, 5.5	
20% of 20	
60% of 40% of 800	
LCM of 3 <sup>2</sup> , 27, 747	
$\sqrt{169 \div 13 + 84 \div 7 + 6 \times 10^2}$	
Remainder when 2013 is divided by 7	
$\log_9 3 \div \log_3 9$	
Remainder when 25% of 1600 is divided by 11	
GCD of 9, 3 <sup>3</sup> , 711	
90% of 9.75	
Percentage increase when 150 increases to 180	
0, 1, 1, 2, 3, ?, 8, 13	
Remainder when 7 <sup>4</sup> is divided by 4	
$\sqrt{72 \div 12 \times 3^4 \div 3^3} \div \sqrt{2^5}$	
$10^1 + 9^2 + 8^3 + 7^4$	
GCD of 24, 44, 100, 124, 144, 200	
Area of square with perimeter 100 units	
Remainder when 11111 is divided by 13	
$1 \times 0^1 + 2 \times 1^2 - 3 \times 2^3 + 4 \times 3^4$	
$0.1 \div 1 + 1.2 \div 2 - 4^4$	
$69 - 72.6 \div 3 \times 4.12 - 7$	
1.21, ?, 1.69, 1.96, 2.25	
$51 \div 0.3 + 0.6 - 10.7 \times 6.9$	
17.98, 15.96, ?, 11.92	
36 + 75% of 63	
$45 - 4 \times 30\% \text{ of } 108$	
$2 \times 3^2 - 3 \times 2^3$	
$17 + 6 \div 2 \times \sqrt{6240} + 1$	
113 - 121 + 69 × 3 - 567.9 + 212.91	