MATHEMATICS · GRADES 4-6

Mental math with large numbers

Difficulty level: Intermediate

Mathematics: Grades 4-6

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Overview of the concept

This is how you handle big numbers in your head without paper, like totalling a grocery bill or splitting a large amount between friends. Big numbers look hard, but breaking them into chunks and rounding as you go makes them manageable without a calculator. You use it to check a large bill before you pay it, to split a big cost fairly, or to estimate whether a quote for a job is in the right ballpark.



Rule

Make a friendly number, do the easy sum, then adjust for what you changed.

If you rounded up, take the extra back off, and if you rounded down, add it back on.

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Worked examples

EXAMPLE 1

Q Work out 298 + 57 in your head.

SOLUTION

Make a friendly number first. 298 is 2 away from 300, so add the 2 on, do the easy sum, then take it back off.

298 + 2 = 300

300 + 57 = 357, 357 – 2 = 355

EXAMPLE 2

Q Work out 600 – 198 in your head.

SOLUTION

198 is 2 away from 200. Round it up, subtract the round number, then add back the extra you took off, because you subtracted 2 too many.

600 – 200 = 400, 400 + 2 = 402

Practice questions

1 What is 499 + 86? Work it out in your head.

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2 **How much is 700 − 295? Find it in your head.**

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3 **Add 148 + 236 in your head by adding in chunks: first the hundreds, then the rest.**

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4 **Count up from 495 to 1000 in your head. What do you get?**

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5 Break 396 + 278 into hundreds, tens, and ones, then add in your head.

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6 Use doubling and halving to work out 25 × 16 in your head.

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7 Work out 9 × 47 in your head using 10 × 47, then subtract one 47.

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8 Add 456 + 234 from left to right in your head.

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9 Estimate 597 + 264 to the nearest hundred.

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10 Maya saves $198 and her brother saves $145. How much do they save together? Work it out in your head.

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ANSWER KEY

1. 585

2. 405

3. 384

4. 505

5. 674

6. 400

7. 423

8. 690

9. 900

10. $343

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