

Equipment

Paper, pencil.

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| 6205 Relationship between add and subt | ract - add several numbers | Page 2 |
|--|----------------------------|--------|
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Concepts

Children should know that if one of the following facts are known, the others can be deduced without further calculation:

2.75 + 1.84 = 4.59 1.84 + 2.75 = 4.59

4.59 - 1.84 = 2.75 4.59 - 2.75 = 1.84

Children should be able to make small adjustments to sums to give correct answers without re-calculating the whole sum. For example:

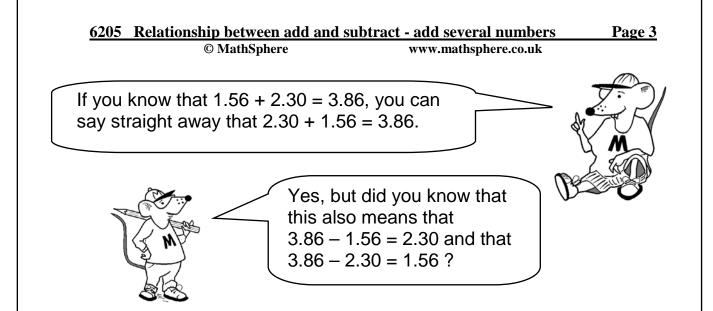
If 4573 + 2548 = 7121, then:

4570 + 2548 = 7118 7120 - 2548 = 4572 7110 - 4573 = 2537

They should be able to add together quickly several numbers such as 58 + 32 + 17 and should spot pairs of numbers that make 10 or 100. They should also be able to add three multiples of 10 such as 50 + 20 + 70.

They should also be able to spot equivalences such as '46 + 48 + 42 + 42 + 44 is the same as $(40 \times 5) + (6 + 8 + 2 + 2 + 4) = 200 + 22 = 222$ '.

Lastly, children should be able to explain their methods and show that they have used shortcuts and logical techniques to arrive at their answers.

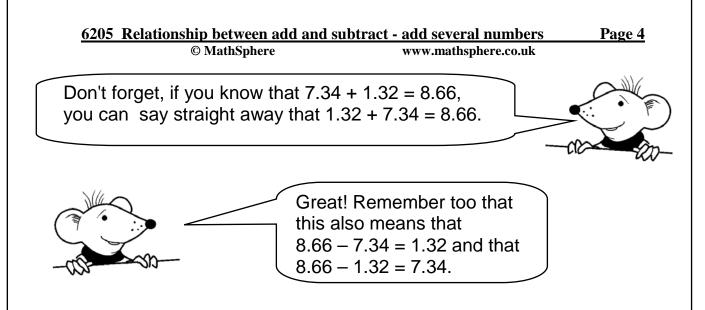


In these questions, you are told one fact about a sum. Write down three others without doing any more sums. The first one is done for you.

1. 2.87 + 4.56 = 7.43

This means that 4.56 + 2.87 = 7.43, 7.43 - 4.56 = 2.87 and 7.43 - 2.87 = 4.56

- **2.** 8.53 + 5.88 = 14.41
- **3.** 4.55 + 3.22 = 7.77
- **4.** 5.92 + 3.42 = 9.34
- **5.** 5.44 + 8.23 = 13.67
- **6.** 2.94 + 6.82 = 9.76
- **7.** 12.74 3.85 = 8.89
- **8.** 45.4 6.45 = 38.95
- **9.** 9.67 2.53 = 7.14
- **10.** 7.88 3.61 = 4.27
- **11.** 4.62 2.58 = 2.04
- **12.** 29.97 12.74 = 17.23

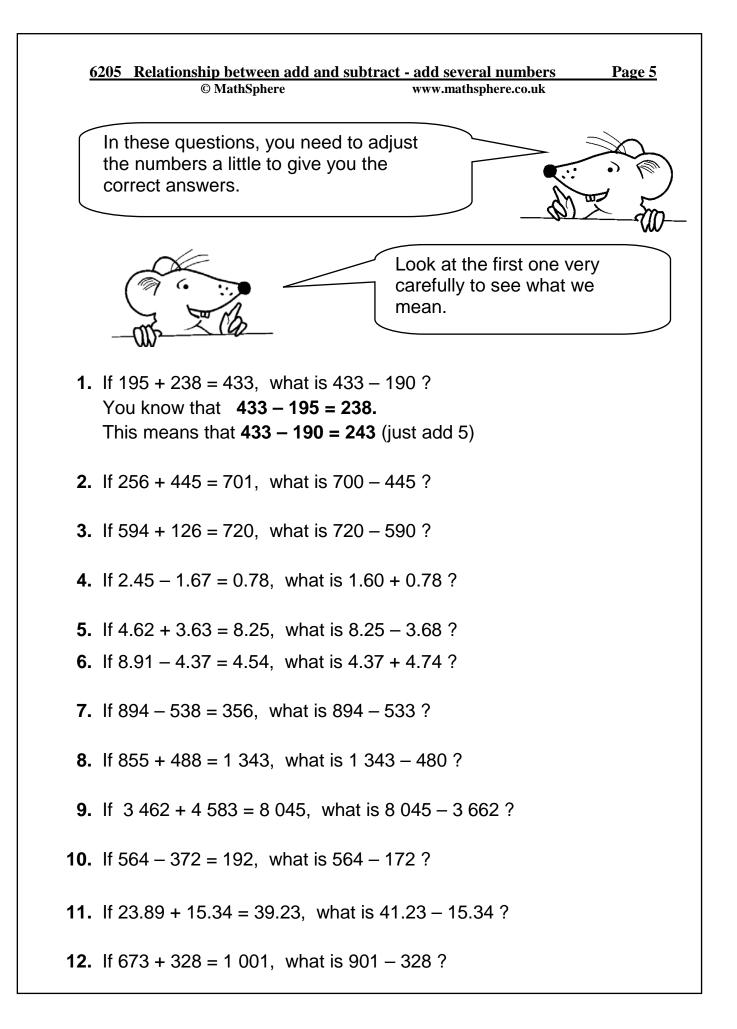


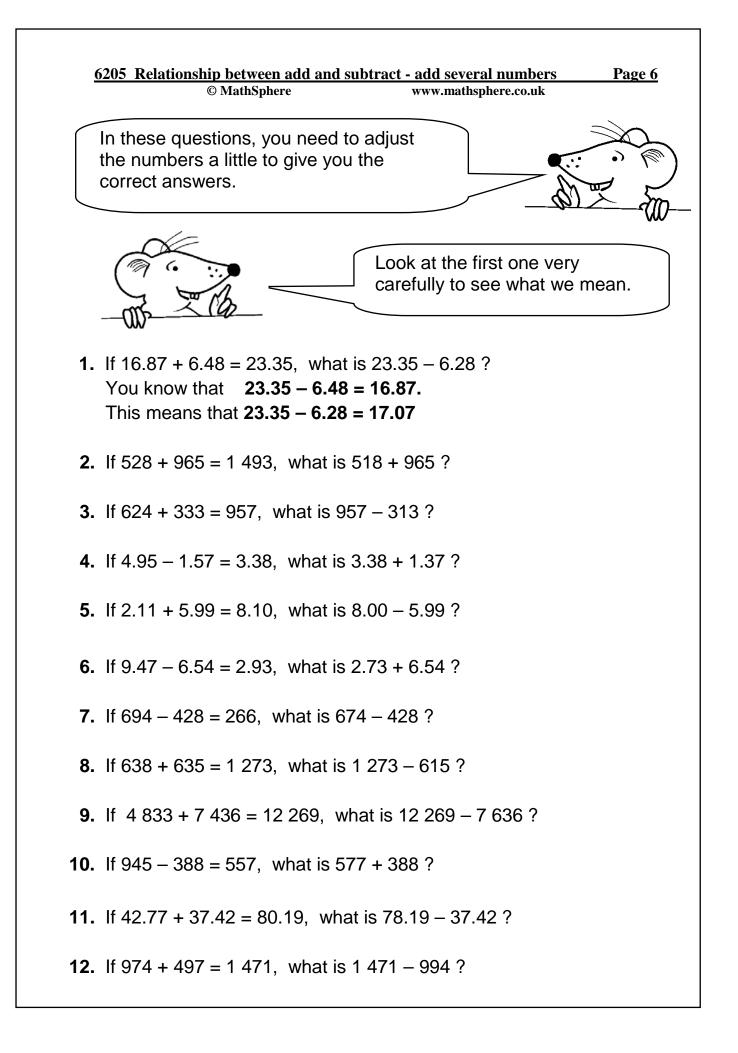
In these questions, you are told one fact about a sum. Write down three others without doing any more sums. The first one is done for you.

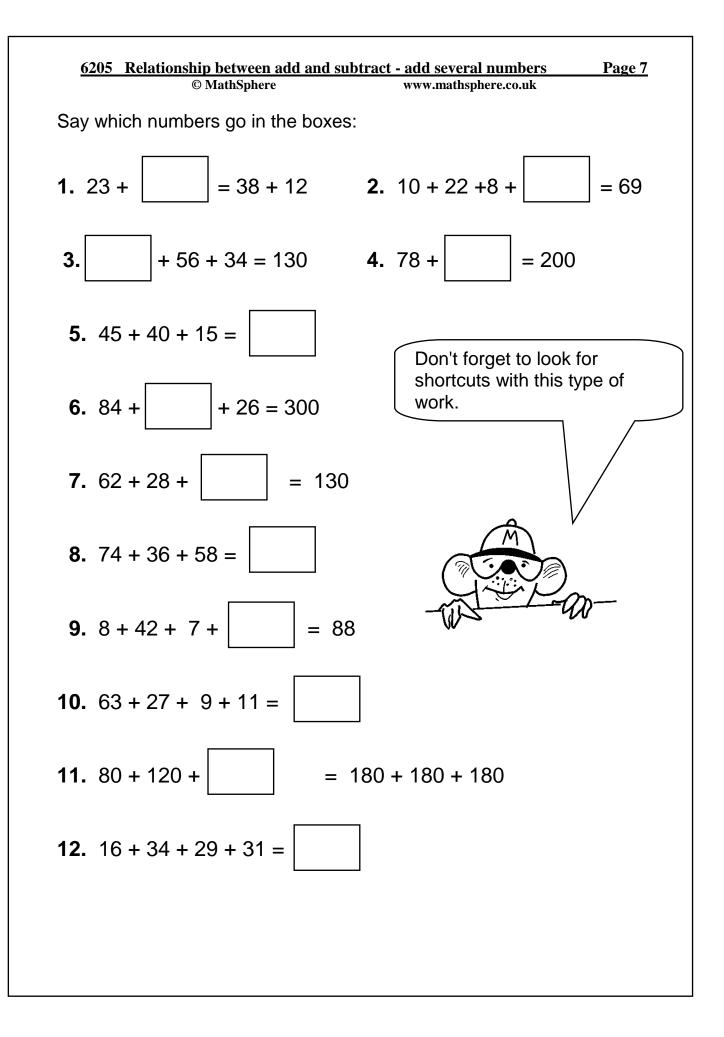
1. 5.48 + 4.23 = 9.71

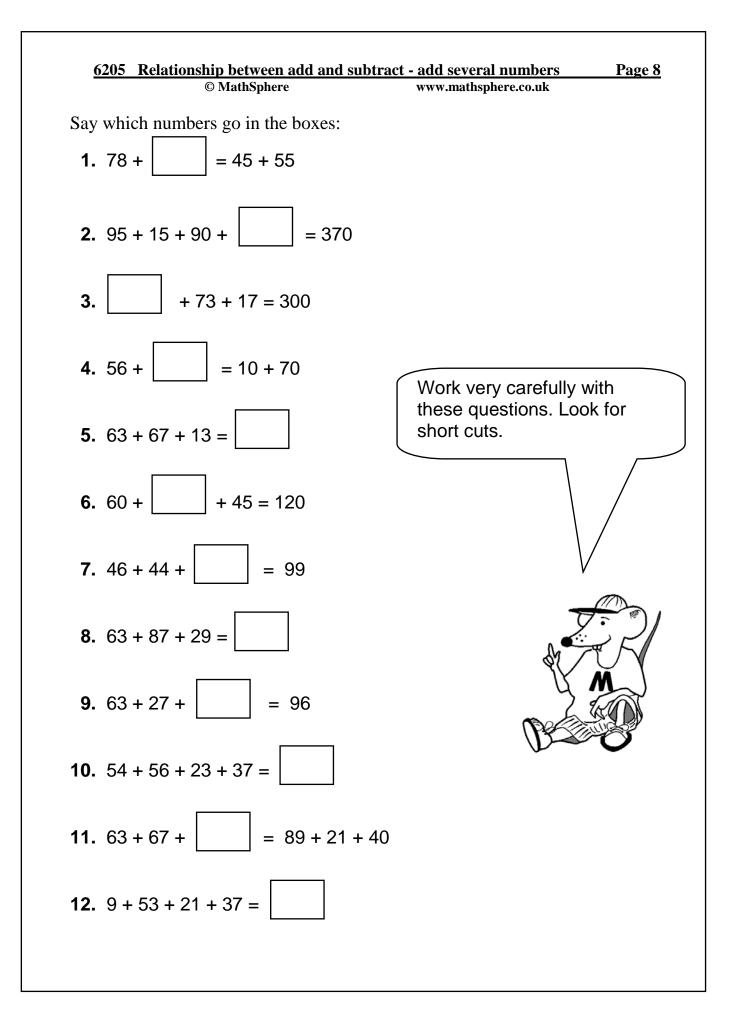
This means that 4.23 + 5.48 = 9.71, 9.71 - 4.23 = 5.48 and 9.71 - 5.48 = 4.23

- **3.** 9.84 + 42.74 = 52.58
- **4.** 8.58 + 4.77 = 13.35
- **5.** 92.6 + 1.09 = 93.69
- **6.** 5.73 + 7.56 = 13.29
- **7.** 7.48 3.64 = 3.84
- **8.** 23.94 18.45 = 5.49
- **9.** 6.48 2.63 = 3.85
- **10.** 99.56 56.28 = 43.28
- **11.** 7.56 4.28 = 3.28
- **12.** 67.36 46.96 = 20.40









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|---|--|
| Without doing any written working | g, answer the following questions: |
| 1. 90 + 60 + 40 | 2. 80 + 30 + 50 + 70 |
| 3. 20 + 80 + 40 | 4. 80 + 50 + 30 + 20 + 60 |
| 5. 40 + 20 + 20 + 40 | 6. 90 + 40 + 50 + 10 + 40 |
| 7. 50 + 30 + 70 | |
| 8. 80 + 60 + 90 + 30 + 70 | I like a hard one to finish with, but I expect you would like an easy one after all that work, |
| 9. 90 + 50 + 60 | so we made number 20 a piece of cake. |
| 10. 60 + 60 + 60 + 60 + 60 | |
| 11. 70 + 60 + 20 + 50 + 20 | M |
| 12. 10 + 80 + 30 | |
| 13. 90 + 50 + 40 + 70 + 30 | 14. 90 + 30 + 50 + 30 + 70 |
| 15. 80 + 130 + 180 | 16. 90 + 120 + 450 |
| 17. 80 + 160 + 70 + 150 + 10 | 18. 10 + 160 + 150 |
| 19. 50 + 50 + 60 + 70 + 190 | 20. 10 + 10 + 10 + 10 + 10 |
| | Dundee, I hope. Yum! |

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|---|--|
| Without doing any written working, and | swer the following questions: |
| 1. 120 + 90 + 80 | 2. 80 + 60 + 50 |
| 3. 90 + 50 + 30 + 40 | 4. 70 + 30 + 90 + 50 |
| 5. 340 + 60 + 70 + 40 | 6. 230 + 170 + 60 + 40 |
| 7. 60 + 90 + 70 + 50 + 80 | You should be pretty good at place value by now with all |
| 8. 50 + 60 + 120 + 80 | this practice with tens! |
| 9. 70 + 40 + 30 + 100 | |
| 10. 90 + 80 + 50 + 50 | |
| 11. 50 + 40 + 450 + 110 | M |
| 12. 90 + 40 + 30 + 50 | |
| 13. 90 + 40 + 30 + 80 | |
| 14. 80 + 20 + 40 + 60 | |
| 15. 60 + 50 + 40 + 30 | 16. 90 + 50 + 60 + 60 |
| 17. 490 + 10 + 60 | 18. 940 + 20 + 30 |
| 19. 320 + 320 + 320 | 20. 150 + 150 + 150 + 150 |
| | |

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|---|---|
| Without doing any written working | g, answer the following questions: |
| 1. 82 + 83 + 85 | 2. 37 + 30 + 35 + 38 |
| 3. 92 + 97 + 92 | 4. 52 + 54 + 54 + 55 + 52 |
| 5. 39 + 35 + 36 + 37 | 6. 29 + 25 + 24 + 23 + 26 |
| 7. 38 + 34 + 34 | You will notice with these sums that the tens of all the numbers in |
| 8. 26 + 26 + 26 + 26 + 26 | a question are the same. |
| 9. 90 + 93 + 98 | In number 1, there are three 80s which are 240 and another 2 + 3 + 5, so the answer is 250. |
| 10. 39 + 37 + 33 + 32 + 37 | |
| 11. 53 + 55 + 56 + 54 + 53 | |
| 12. 19 + 16 + 14 | M |
| 13. 15 + 13 + 16 + 12 + 14 | 14. 17 + 16 + 16 + 18 |
| 15. 49 + 46 + 48 | 16. 38 + 36 + 37 |
| 17. 29 + 27 + 26 + 25 + 25 | 18. 129 + 125 + 128 |
| 19. 82 + 83 + 86 + 89 + 82 | 20. 92 + 91 + 93 + 94 + 92 |
| | |

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| Without doing any written working, a | answer the following questions: |
| 1. 37 + 38 +35 | 2. 28 + 26 + 27 |
| 3. 27 + 23 + 28 + 21 + 27 | 4. 49 + 48 + 46 |
| 5. 17 + 19 + 13 + 19 + 17 | 6. 49 + 42 + 43 + 45 + 48 |
| 7. 52 + 54 + 52 | You will notice with these sums that the tens of all the numbers |
| 8. 68 + 65 + 63 | in a question are the same. In number 1, there are three |
| 9. 16 + 18 + 17 + 14 + 19 | 30s which are 90 and another $7 + 8 + 5$, so the answer is 110. |
| 10. 63 + 67 + 62 + 63 + 64 | |
| 11. 54 + 53 + 58 + 53 +55 | |
| 12. 35 + 35 + 38 | |
| 13. 38 + 34 + 36 + 38 + 32 | 14. 57 + 56 + 54 |
| 15. 26 + 27 + 25 | 16. 53 + 57 + 58 |
| 17. 53 + 52 + 59 + 59 + 57 | 18. 49 + 48 + 43 |
| 19. 12 + 17 + 18 + 15 + 18 | 20. 74 + 73 + 78 + 79 + 72 |
| | |

| | | etween add and subtrac hSphere | | mathsphere.co.uk | Page |
|-----------------|-------------------------|---|----------------|--|------|
| | | Answei | rs | | |
| | | | | | |
| Page 3 | | | | | |
| | | 7.43 - 4.56 = 2.87 | and | | |
| | , | 14.41 - 5.88 = 8.53 | and | 14.41 - 8.53 = 5.88 | |
| | 4.55 = 7.77, | 7.77 - 3.22 = 4.55 | and | 7.77 - 4.55 = 3.22 | |
| | 5.92 = 9.34, | 9.34 - 3.42 = 5.92 | and | 9.34 - 5.92 = 3.42 | |
| | | 13.67 - 8.23 = 5.44 | | 13.67 - 5.44 = 8.23 | |
| | 2.94 = 9.76, | | and | 9.76 - 2.94 = 6.82 | |
| | | 8.89 + 3.85 = 12.74 | and | 3.85 + 8.89 = 12.74 | |
| | 38.95 = 6.54, | | and | 6.54 + 38.95 = 45.4 | |
| | 7.14 = 2.53, | | and | 2.53 + 7.14 = 9.67 | |
| | - | 4.27 + 3.61 = 7.88 | and | | |
| | | 2.04 + 2.58 = 4.62 17 23 + 12 74 - 20 07 | and | 2.58 + 2.04 = 4.62 $12.74 + 17.23 = 29.97$ | |
| 14,29.91 | -11.23 = 12.14, | 17.23 + 12.74 = 29.97 | and | 12.14 + 11.23 = 29.91 | |
| Page 4 | | | | | |
| | 5.48 = 9.71, | | | 9.71 - 5.48 = 4.23 | |
| | 16.93 = 25.16, | | | 25.16 - 16.93 = 8.23 | |
| 3. 42.74 | +9.84 = 52.58, | 52.58 - 42.74 = 9.84 | and | 52.58 - 9.84 = 42.74 | |
| | 8.58 = 13.35, | 13.35 - 4.77 = 8.58 | and | | |
| | 92.6 = 93.69, | | and | | |
| | 5.73 = 13.29, | 13.29 - 7.56 = 5.73 | | 13.29 - 5.73 = 7.56 | |
| | 3.84 = 3.64, | | and | | |
| | -5.49 = 18.45, | | | | |
| | 3.85 = 2.63, | 3.85 + 2.63 = 6.48 | | 2.63 + 3.85 = 6.48 | - |
| | -43.28 = 56.28, | | | 56.28 + 43.28 = 99.56 | 5 |
| | 3.28 = 4.28, | 3.28 + 4.28 = 7.56 | and | | |
| 12.67.36 | -20.40 = 46.96, | 20.40 + 46.96 = 67.3 | 6 and | 46.96 + 20.40 = 6/.36 | 5 |
| Page 5 | | | | | |
| 1. 243 | | 4. 2.38 | | | |
| 7. 361 | 8. 863 9. | 4 383 10. 392 1 | 1. 25.8 | 12. 573 | |
| Page 6 | | | | | |
| 1. 17.07 | 2. 1 483 | 3. 644 4. 4.75 | 5. 2. | 6. 9.27 | |
| 7. 246 | | 9. 4 633 10. 965 | 11. 4(| | |
| | | | | | |
| Page 7 | | 4. 100 - | 100 | <u> </u> | |
| 1. 27 | | 40 4. 122 5. | | 6. 190 | |
| 7. 40 | 8. 168 9. | 10. 110 11. | 340 | 12. 110 | |
| Page 8 | | | | | |
| 1. 22 | 2. 170 3. | 4. 24 5. | 143 | 6. 15 | |
| | 8. 179 9. | 6 10. 170 11. | | | |

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| Answers (Contd) | | | | | | | | |
| Page 9 | | | | | | | | |
| 1. 190 | 2. 230 | 3. 140 | 4. 240 | 5. 120 | 6. 230 | 7. 150 | | |
| 8. 330 | 9. 200 | 10. 300 | 11. 220 | 12. 120 | 13. 280 | 14. 270 | | |
| 15. 390 | 16. 660 | 17. 470 | 18. 320 | 19. 420 | 20. 50 | | | |
| Page 10 | | | | | | | | |
| 1.290 | 2. 190 | 3. 210 | 4. 240 | 5. 510 | 6. 500 | 7. 350 | | |
| 8. 310 | 9. 240 | 10. 270 | 11. 650 | 12. 210 | 13. 240 | 14. 200 | | |
| 15. 180 | 16. 260 | 17. 560 | 18. 990 | 19. 960 | 20. 600 | | | |
| Page 11 | | | | | | | | |
| 1.250 | 2. 140 | 3. 281 | 4. 267 | 5. 147 | 6. 127 | 7. 106 | | |
| 8. 130 | 9. 281 | 10. 178 | 11. 271 | 12. 49 | 13. 70 | 14. 67 | | |
| 15. 143 | 16. 111 | 17. 132 | 18. 382 | 19. 422 | 20. 462 | | | |
| Page 12 | | | | | | | | |
| 1. 110 | 2. 81 | 3. 126 | 4. 143 | 5. 85 | 6. 227 | 7. 158 | | |
| 8. 196 | 9. 84 | 10. 319 | 11. 273 | 12. 108 | 13. 178 | 14. 167 | | |
| 15. 78 | 16. 168 | 17. 280 | 18. 140 | 19. 80 | 20. 376 | | | |