

Equipment

Paper, pencil.

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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:

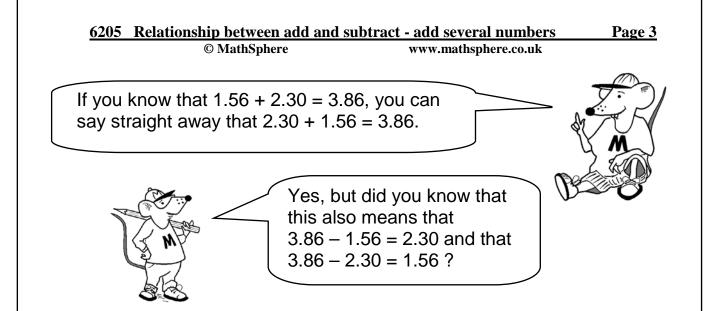
If 4573 + 2548 = 7121, then:

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.

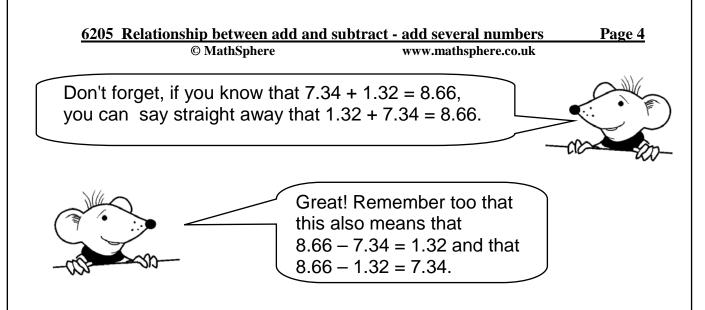


In these questions, you are told one fact about a sum. Write down three others without doing any more sums. The first one is done for you.

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

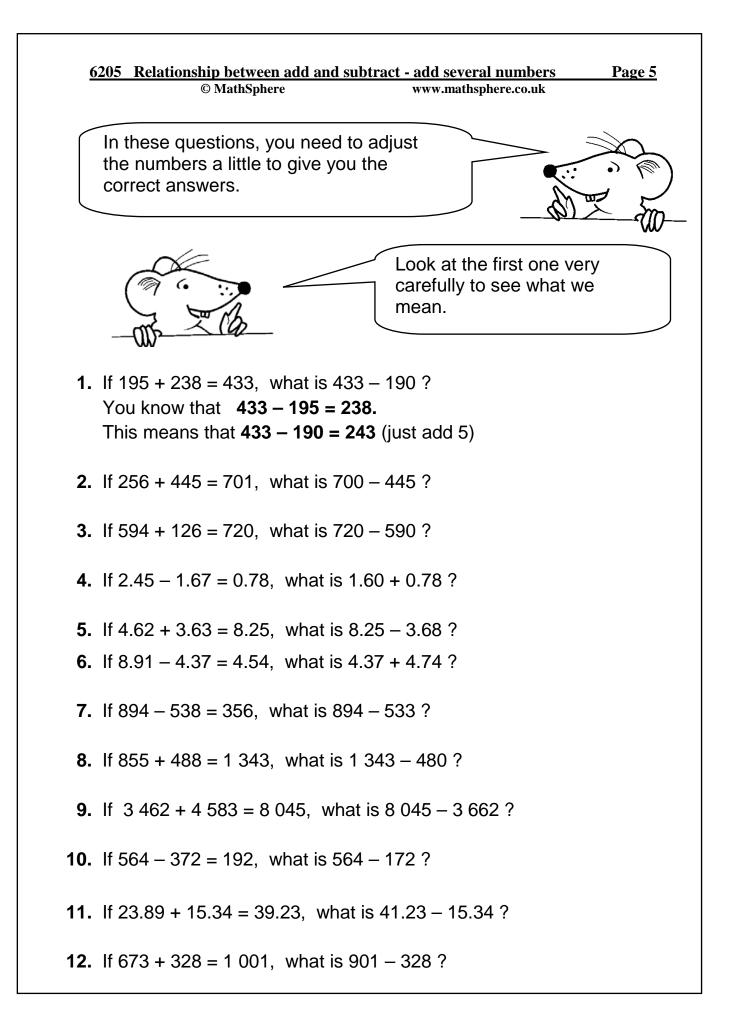


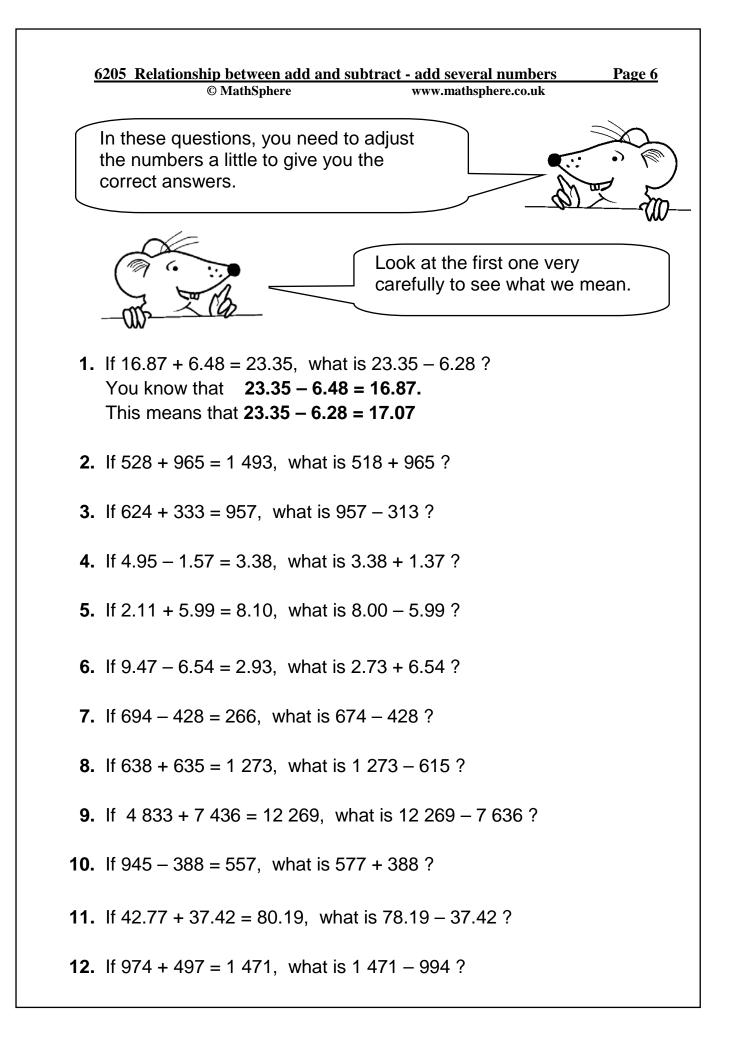
In these questions, you are told one fact about a sum. Write down three others without doing any more sums. The first one is done for you.

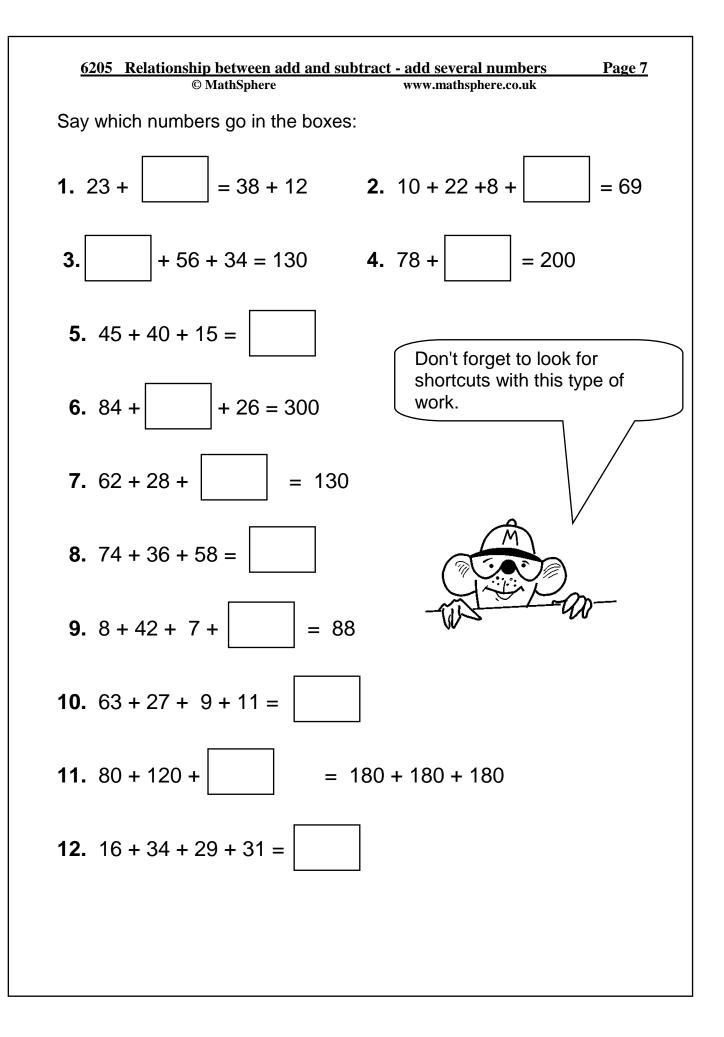
1. 5.48 + 4.23 = 9.71

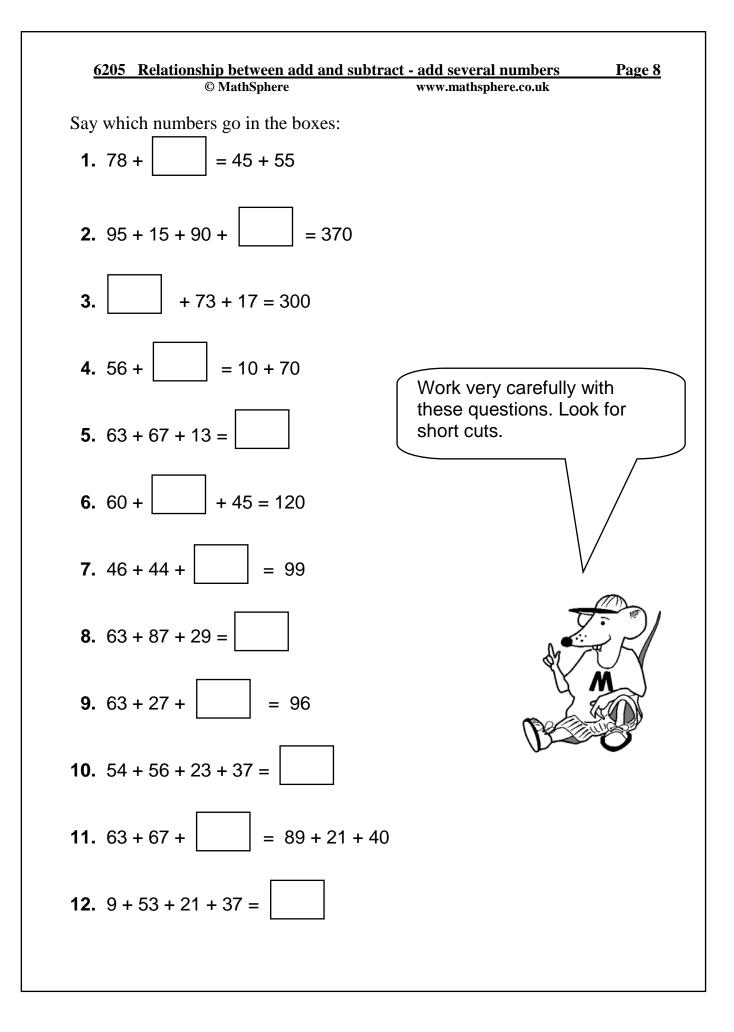
This means that 4.23 + 5.48 = 9.71, 9.71 - 4.23 = 5.48 and 9.71 - 5.48 = 4.23

- **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			