

Further Examples for Exploring and Embedding strategies

The following numerical problems will provide opportunities for pupils to deepen their initial understanding of each strategy and to become more efficient in its application.

Addition & Subtraction

Doubles/Near Doubles

8 + 9	36 + 37	99 + 99	498 + 499	1.24 + 1.25
15 + 15	48 + 49	198 + 198	998 + 998	6.2 + 6.1
11 + 12	49 + 52	248 + 248	1.2 + 1.3	7.15 + 8.16
17 + 18	38 + 37	298 + 297	5.9 + 5.8	20.25 + 20.24

Facts of Ten

18 + 12	73 + 17	180 + 120	730 + 170	1.8 + 1.2
17 + 53	62 + 28	170 + 530	620 + 280	1.7 + 5.3
16 + 34	41 + 59	160 + 340	410 + 590	1.6 + 3.4
19 + 31	34 + 56	190 + 310	240 + 560	1.9 + 3.1

Bridging Through Ten

18 + 13	78 + 17	188 + 107	738 + 156	1.8 + 1.3
18 + 53	28 + 65	176 + 217	626 + 229	1.7 + 5.4
17 + 34	47 + 59	167 + 325	417 + 504	1.6 + 3.7
19 + 33	56 + 35	319 + 144	569 + 223	1.9 + 3.3

Reordering¹

5 + 13 + 5	13 + 21 + 13	17 + 9 – 7	1.7 + 2.8 + 0.3
10 + 10 + 2	6 + 13 + 4 + 3	25 + 35 + 75	34 + 27 = 46
5 + 7 + 5	28 + 75	58 + 47 – 38	4.7 + 5.6 – 0.7
12 – 7 – 2	12 + 17 + 8 + 3	180 + 650	3 + 8 + 7 = 6 + 2

Partitioning by Place Value²

22 + 26	37 + 18	53 + 38	86 – 45	7.2 – 5.1
24 + 35	16 + 26	45 + 47	49 – 24	3.5 – 1.3
18 + 31	25 + 38	17 + 55	47 – 26	3.8 + 1.1
57 + 31	28 + 24	46 = 38	56 – 34	2.2 + 2.7

¹ Crown (2010) *Teaching Children to Calculate Mentally*. p 31

² Parrish, S (2010). *Number Talks Helping Children Build Mental Math and Computation Strategies*

Compensating³

$8 + 6$	$116 + 118$	$19 + 18$	$223 + 218$	$0.7 + 0.8$
$9 + 6$	$16 + 19$	$49 + 6$	$233 + 458$	$3.8 + 3.6$
$18 + 23$	$23 + 19$	$49 + 49$	$438 + 522$	$1.7 + 7.8$
$36 + 9$	$41 + 19$	$48 + 52$	$528 + 415$	$1.7 = 3.7$

Bridging Through Sixty for Time

$1:45 + 2:20$	$3:56 + 1:15$	$20:15 - 2:30$	$16:04 - 1:15$
$3:15 + 0:55$	$2:47 + 2:26$	$3:20 - 1:25$	$14:13 - 2:28$
$0:15 + 0:50$	$7:43 + 3:28$	$15:40 - 13:55$	$18:32 - 3:40$
$19:25 + 1:55$	$14:32 + 1:59$	$12:05 - 3:20$	$23:11 - 0:55$

Subtraction as Think Addition⁴

$13 - 8$	$42 - 27$	$200 - 149$	$1000 - 671$	$7.0 - 3.4$
$15 - 9$	$100 - 37$	$125 - 83$	$444 - 298$	$10 - 4.4$
$24 - 18$	$150 - 49$	$335 - 187$	$500 - 249$	$20 - 14.9$
$33 - 19$	$200 - 99$	$146 - 89$	$1000 - 499$	$5.5 - 3.7$

Keeping a Constant Difference⁵

$15 - 6$	$44 - 29$	$351 - 119$	$209 - 151$	$1000 - 674$
$51 - 19$	$100 - 48$	$300 - 151$	$100 - 34$	$2000 - 797$
$49 - 17$	$112 - 88$	$249 - 117$	$315 - 106$	$122 - 77$
$71 - 36$	$171 - 158$	$500 - 367$	$151 - 98$	$127 - 88$

³ Parrish, S (2010). *Number Talks Helping Children Build Mental Math and Computation Strategies* p.138 - 140

⁴ Parrish, S (2010). *Number Talks Helping Children Build Mental Math and Computation Strategies* p. 209 - 211

⁵ Parrish, S (2010). *Number Talks Helping Children Build Mental Math and Computation Strategies* p. 227 - 229