Name _____ Date _____

LO: To estimate answers and to use inverse operations.

Given a subtraction I can write a corresponding addition and vice versa.

I can use an estimate to check the reasonableness of a calculation. I can write four fact families for additions & subtractions (e.g. 12+7=19, 7+12=19, 19-12=7, 19-7=12).

I understand that addition and subtraction are inverse operations. I can write fact families with unknowns (e.g. 17+□=45 => □+17=45, 45-□=17 and 45-17=□).

Challenge 1

First each bar model. Estimate to see if it makes sense.
If it does not - cross it out. ✗
If it does, write down the calculations you can make from it. ✓

5	9
14	

□ + □ = □
□ + □ = □
□ − □ = □
□ − □ = □

6	6
14	

□ + □ = □
□ + □ = □
□ − □ = □
□ − □ = □

3	9
12	

□ + □ = □
□ + □ = □
□ − □ = □
□ − □ = □

15	7
45	

□ + □ = □
□ + □ = □
□ − □ = □
□ − □ = □

18	7
25	

□ + □ = □
□ + □ = □
□ − □ = □
□ − □ = □

5	7
12	

□ + □ = □
□ + □ = □
□ − □ = □
□ − □ = □



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Challenge 2

First each bar model. Estimate to see if it makes sense.

If it does not - cross it out. ✗

If it does, write down the calculations you can make from it. ✓



25	55
103	

□ + □ = □

□ + □ = □

□ − □ = □

□ − □ = □

63	93
156	

□ + □ = □

□ + □ = □

□ − □ = □

□ − □ = □

97	72
169	

□ + □ = □

□ + □ = □

□ − □ = □

□ − □ = □

47	74
121	

□ + □ = □

□ + □ = □

□ − □ = □

□ − □ = □

87	15
135	

□ + □ = □

□ + □ = □

□ − □ = □

□ − □ = □

69	26
95	

□ + □ = □

□ + □ = □

□ − □ = □

□ − □ = □

Name _____ Date _____

LO: To estimate answers and to use inverse operations.

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I understand that addition and subtraction are inverse operations. I can write fact families with unknowns (e.g. 17+□=45 => □+17=45, 45-□=17 and 45-17=□).

Challenge 3

First each bar model. Estimate to see if it makes sense.
If it does not - cross it out. ✗
If it does, write down the calculations you can make from it. ✓

339	300
639	

565	137
702	

114	813
927	

□ + □ = □
□ + □ = □
□ − □ = □
□ − □ = □

□ + □ = □
□ + □ = □
□ − □ = □
□ − □ = □

□ + □ = □
□ + □ = □
□ − □ = □
□ − □ = □

148	671
1024	

576	♡
812	

943	771
541	

□ + □ = □
□ + □ = □
□ − □ = □
□ − □ = □

□ + □ = □
□ + □ = □
□ − □ = □
□ − □ = □

□ + □ = □
□ + □ = □
□ − □ = □
□ − □ = □



Challenge 1 Answers

5	9
14	

5 + 9 = 14

9 + 5 = 14

14 − 5 = 9

14 − 9 = 5

6	6
14	



3	9
12	

3 + 9 = 12

9 + 3 = 12

12 − 3 = 9

12 − 9 = 3

15	7
45	



18	7
25	

18 + 7 = 25

7 + 18 = 25

25 − 18 = 7

25 − 7 = 18

5	7
12	

7 + 5 = 12

5 + 7 = 12

12 − 7 = 5

12 − 5 = 7

More at tes.com (search TES222). All illustrations from https://openclipart.org.

Challenge 2 Answers

25	55
103	



63	93
156	

63 + 93 = 156

93 + 63 = 156

156 − 63 = 93

156 − 93 = 63

97	72
169	

97 + 72 = 169

72 + 97 = 169

169 − 97 = 72

169 − 72 = 97

47	74
121	

47 + 74 = 121

74 + 47 = 121

121 − 47 = 74

121 − 74 = 47

87	15
135	



69	26
95	

69 + 26 = 95

26 + 69 = 95

95 − 69 = 26

95 − 26 = 69

More at tes.com (search TES222). All illustrations from https://openclipart.org.

Challenge 3 Answers

339	300
639	

339 + 300 = 639

300 + 339 = 639

639 − 300 = 339

639 − 339 = 300

565	137
702	

565 + 137 = 702

137 + 565 = 702

702 − 565 = 137

702 − 137 = 565

114	813
927	

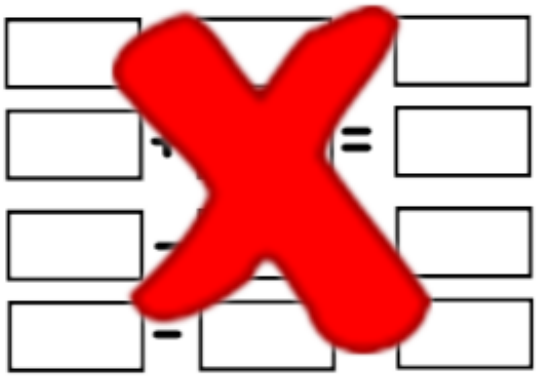
114 + 813 = 927

813 + 114 = 927

927 − 114 = 813

927 − 813 = 114

148	671
1024	



576	♡
812	

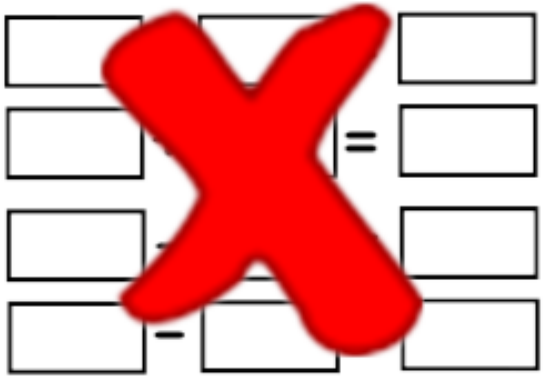
576 + ♥ = 812

♥ + 576 = 812

812 − 576 = ♥

812 − ♥ = 576

943	771
541	



More at tes.com (search TES222). All illustrations from https://openclipart.org.