

Solving more maths problems – Teacher information

Examples of students' working

These examples are generally listed from the most sophisticated to the least sophisticated. The mean ability of students using each strategy largely follows the stages of the number framework. Click on the link [Analysis of student responses for NM1329](#) for the breakdown of how many students answered using different strategies.

Partitioning using rounding and compensation to cross boundaries

(c) $85 - 39$

$85 - 39 =$
 39
 85
 40
 $+ 40$
 85
 15
 80
 $40 + 5 = 45 + 1 = 46$
 Answer: 46

Partitioning by using rounding to a tidy number and compensation

(a) $28 - 12$

$28 - 12 =$
 $28 - 10 = 18$
 $18 - 2 = 16$
 Answer: 16

(b) $65 - 27$

$65 - 27 = 65$
 $65 - 20 = 45$
 $45 - 7 = 38$
 Answer: 38

(c) $85 - 39$

$85 - 40 = 45$
 $45 - 6 = 39$
 40
 $+$
 39
 79
 46
 Answer: 46

Place value partitioning using compensation including "borrowing and payback" or "renaming"

(b) $65 - 27$

$19 - 7 = 8$
 $50 - 20 = 30$
 $30 + 8 = 38$

Answer: 38

Skip counting backwards or forwards in tens with compensation

(b) $65 - 27$

Answer: 38

Place value partitioning using tens and ones, compensating using negative numbers

(b) $65 - 27$

$6 - 2 = 4$
 $5 - 7 = -2$
 So it is 38

Answer: 38

Place value partitioning using tens and ones

(a) $28 - 12$

$20 - 10 = 10$
 $8 - 2 = 6$
 So it is 16

Answer: 16

Place value partitioning expressing tens as ones

(a) $28 - 12$

$28 - 12 = 16$
 $2 - 1 = 1$
 $8 - 2 = 6$
 Then put together

Answer: 16

Vertical subtraction algorithm

(a) 28 - 12

28 -12 <hr style="width: 50%; margin: 0 auto;"/> 16	28 -12 <hr style="width: 50%; margin: 0 auto;"/> 16	28 -12 <hr style="width: 50%; margin: 0 auto;"/> 16	Answer: <u>16</u>
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