Reasoning and Problem Solving
Step 16: Add Three 1-Digit Numbers

National Curriculum Objectives:

Mathematics Year 2: (2C2a) <u>Add and subtract numbers mentally, including: adding three one-digit numbers</u>

Differentiation:

Questions 1, 4 and 7 (Problem Solving)
Developing Identify 3 numbers which add together to make a given total below 20. Find 3 possible answers. Number bonds to 10 included and Numicon used for support.
Expected Identify 3 numbers which add together to make a given total below 20. Find 4 possible answers. Some number bonds to 10 included. Counters and numerals used.
Greater Depth Identify 3 numbers which add together to make a given total up to or beyond 20. Find 4 possible answers. Numbers and words used.

Questions 2, 5 and 8 (Problem Solving)
Developing Arrange cards to create a number sentence with a total below 20 and identify the card which is not needed. Number bonds for 10 included and Numicon used for support.
Expected Arrange cards to create a number sentence with a total below 20 and identify the card which is not needed. Some number bonds to 10 included. Numerals used.
Greater Depth Arrange cards to create a number sentence with a total up to or beyond 20 and identify the card which is not needed. No number bonds for 10 included. Numerals and words used.

Questions 3, 6 and 9 (Reasoning)
Developing Identify the odd one out and explain why. Number bonds to 10 included and Numicon used for support.
Expected Identify the odd one out and explain why. Some number bonds to 10 included. Numerals used.
Greater Depth Identify the odd one out and explain why. Some totals beyond 20. No number bonds to 10 included. Numerals and words used.
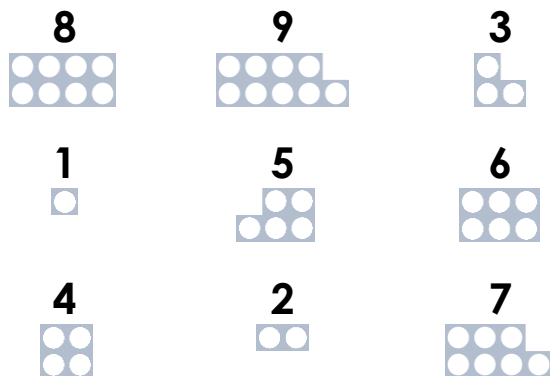
More <u>Year 2 Addition and Subtraction</u> resources.

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Add Three 1-Digit Numbers

Add Three 1-Digit Numbers

1a. Find 3 numbers which add together to make 13.

8	9	3
1	5	6
4	2	7

Find 3 solutions.

⭐ D

PS

1b. Find 3 numbers which add together to make 12.

4	1	9
5	7	3
2	8	6

Find 3 solutions.

⭐ D
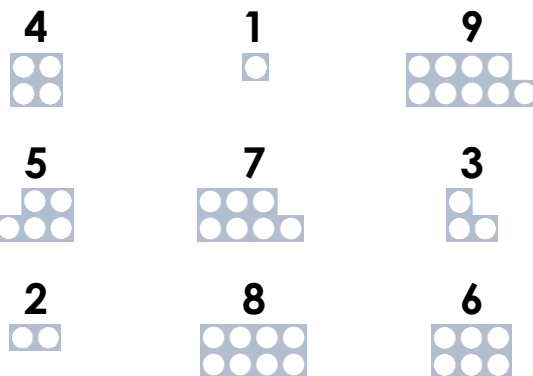
PS

2a. Put the cards in the correct order to create a number sentence.

+	2	7	12

3	+	4	=
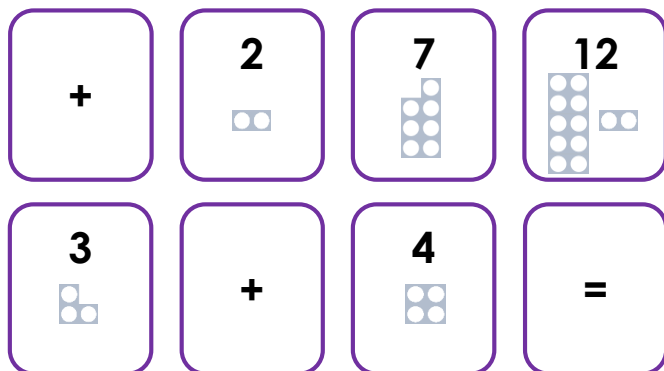
Which card is not needed?

⭐ D

PS

2b. Put the cards in the correct order to create a number sentence.

13	6	+	=

4	2	+	3
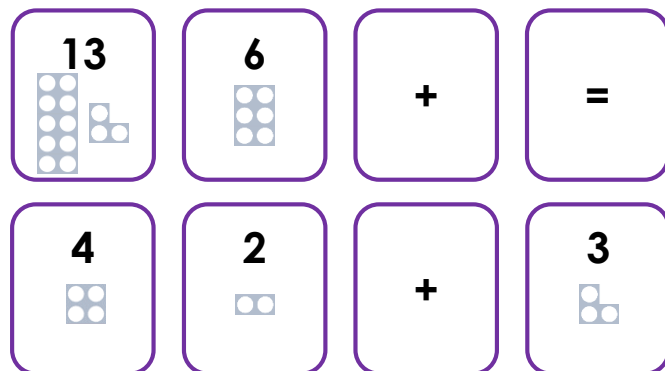
Which card is not needed?

⭐ D

PS

3a. Find the odd one out.
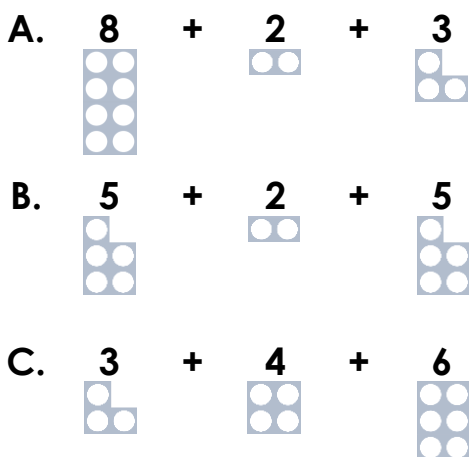
A.   8   +   2   +   3

B.   5   +   2   +   5

C.   3   +   4   +   6

Explain your answer.

⭐ D

R

3b. Find the odd one out.

A.   6   +   4   +   5

B.   4   +   6   +   4

C.   5   +   5   +   5

Explain your answer.

⭐ D

R

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Reasoning and Problem Solving – Add Three 1-Digit Numbers – Year 2 Developing
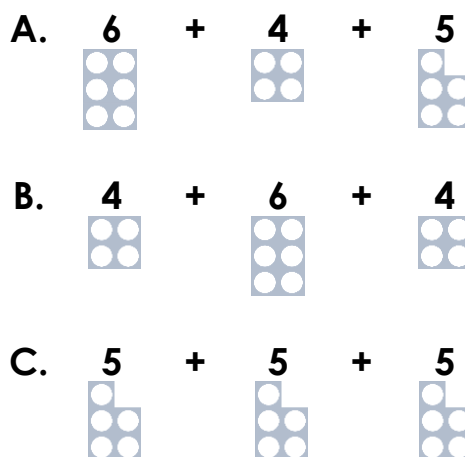
Add Three 1-Digit Numbers

Add Three 1-Digit Numbers

4a. Find 3 numbers which add together to make 16.

8	9	3
1	5	6
4	2	7
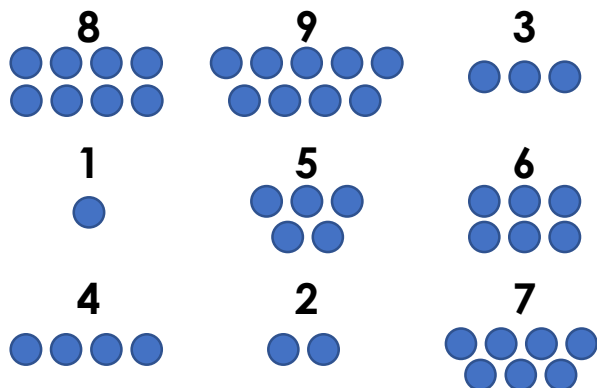
Find 4 solutions.

PS

4b. Find 3 numbers which add together to make 14.

4	1	9
5	7	3
2	8	6
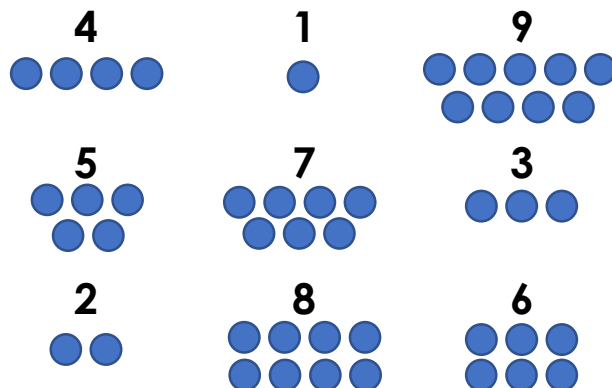
Find 4 solutions.

PS

5a. Put the cards in the correct order to create a number sentence.

6	19	9	+
=	4	18	+

Which card is not needed?

PS

5b. Put the cards in the correct order to create a number sentence.

=	8	+	3
6	+	4	15

Which card is not needed?

PS

6a. Find the odd one out.

A. 8 + 9 + 2

B. 8 + 8 + 3

C. 6 + 9 + 3

Explain your answer.

R

6b. Find the odd one out.

A. 7 + 3 + 7

B. 6 + 6 + 4

C. 8 + 6 + 2

Explain your answer.

R

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Reasoning and Problem Solving – Add Three 1-Digit Numbers – Year 2 Expected

Add Three 1-Digit Numbers

Add Three 1-Digit Numbers

7a. Find 3 numbers which add together to make 19.

eight	five	three
eight	four	nine
seven	nine	six

Find 4 solutions.

⭐GD

PS

7b. Find 3 numbers which add together to make 21.

four	six	nine
seven	eight	nine
five	eight	seven

Find 4 solutions.

⭐GD

PS

8a. Put the cards in the correct order to create a number sentence.

7	=	+	eight
20	five	+	6

Which card is not needed?

⭐GD

PS

8b. Put the cards in the correct order to create a number sentence.

six	+	nine	6
19	seven	=	+

Which card is not needed?

⭐GD

PS

9a. Find the odd one out.

A.   8   +   9   +   5

B.   six   +   eight   +   eight

C.   7   +   7   +   9

Explain your answer.

⭐GD

R

9b. Find the odd one out.

A.   six   +   five   +   eight

B.   6   +   7   +   7

C.   eight   +   nine   +   three

Explain your answer.

⭐GD

R

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Reasoning and Problem Solving – Add Three 1-Digit Numbers – Year 2 Greater Depth

Reasoning and Problem Solving
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Developing

1a. Various answers, for example:
9 + 1 + 3; 8 + 2 + 3; 3 + 4 + 6
2a. 7 + 3 + 2 = 12 (parts arranged in any order). The 4 card is not needed.
3a. B is the odd one out. A and C each total 13 but B totals 12.

Expected

4a. Various answers, for example:
9 + 1 + 6; 7 + 3 + 6; 9 + 2 + 5; 5 + 7 + 4
5a. 6 + 4 + 9 = 19 (parts arranged in any order). The 18 card is not needed.
6a. C is the odd one out. A and B each total 19 but C totals 18.

Greater Depth

7a. Various possible answers, for example:
nine + three + seven; eight + five + six; eight + eight + three; nine + four + six
8a. 7 + five + eight = 20 (parts arranged in any order). The 6 card is not needed.
9a. C is the odd one out. A and B each total 22 but C totals 23.

Developing

1b. Various answers, for example:
7 + 3 + 2; 9 + 1 + 2; 4 + 6 + 2
2b. 6 + 4 + 3 = 13 (parts arranged in any order). The 2 card is not needed.
3b. B is the odd one out. A and C each total 15 but B totals 14.

Expected

4b. Various answers, for example:
8 + 2 + 4; 7 + 6 + 1; 5 + 3 + 6; 9 + 1 + 4
5b. 8 + 4 + 3 = 15 (parts arranged in any order). The 6 card is not needed.
6b. A is the odd one out. B and C each total 16 but A totals 17.

Greater Depth

7b. Various possible answers, for example:
four + nine + eight; eight + eight + five; seven + eight + six; seven + nine + five
8b. six + seven + 6 = 16 (parts arranged in any order). The nine card is not needed.
9b. A is the odd one out. B and C each total 20 but A totals 19.

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