

Reasoning and Problem Solving

Step 3: Compare Number Sentences

National Curriculum Objectives:

Mathematics Year 2: (2C1) Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100

Mathematics Year 2: (2C4) Solve problems with addition and subtraction using concrete objects and pictorial representations, including those involving numbers, quantities and measures; applying their increasing knowledge of mental and written methods

Differentiation:

Questions 1, 4 and 7 (Problem Solving)

Developing Find three different ways to make a statement correct. Using numbers within 10.

Expected Find four different ways to make a statement correct. Using numbers within 20.

Greater Depth Find four different ways to make a statement correct. Using numbers within 30.

Questions 2, 5 and 8 (Reasoning)

Developing Explain if a statement using less than, greater than or equal to is correct. Using numbers within 10 (numerals and symbols).

Expected Explain if a statement using less than, greater than or equal to is correct. Using numbers within 20 (words and numerals).

Greater Depth Explain if a statement using less than, greater than or equal to is correct. Using numbers within 30 (words and numerals).

Questions 3, 6 and 9 (Problem Solving)

Developing Rearrange digit cards to make a statement correct. Includes numbers to 10.

Expected Rearrange the digit cards to make a statement correct. Includes numbers to 20.

Greater Depth Rearrange the digit cards to make a statement correct. Includes numbers to 30.

More [Year 2 Addition and subtraction](#) resources.

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Reasoning and Problem Solving – Compare Number Sentences

1a. Find three different combination of numbers that will make this statement correct.

$$3 + 4 = \square + \square$$



PS

1b. Find three different combination of numbers that will make this statement correct.

$$6 + 3 = \square + \square$$



PS

2a. Jack says,



$$2 + 8 < 3 + 7$$

Do you agree with Jack? Convince me.



R

2b. Francesca says,



$$4 + 2 > 5 + 3$$

Do you agree with Francesca? Convince me.



R

3a. These digit cards have been placed incorrectly. Rearrange the digit cards so the statement makes sense.

$$\boxed{3} + \boxed{2} > \boxed{5} + \boxed{4}$$



PS

3b. These digit cards have been placed incorrectly. Rearrange the digit cards so the statement makes sense.

$$\boxed{7} + \boxed{0} < \boxed{1} + \boxed{6}$$



PS

Reasoning and Problem Solving – Compare Number Sentences

4a. Find four different combination of numbers that will make this statement correct.

$$7 + 6 = \square + \square$$



PS

4b. Find four different combination of numbers that will make this statement correct.

$$5 + 9 = \square + \square$$



PS

5a. Betty says,



$9 + 6$ is less than eight add seven

Do you agree with Betty? Convince me.



R

5b. Ismail says,



$8 + 5$ is more than $9 + 4$

Do you agree with Ismail? Convince me.



R

6a. These digit cards have been placed incorrectly. Rearrange the digit cards so the statement makes sense.

$$\boxed{6} + \boxed{5} > \boxed{7} + \boxed{4}$$



PS

6b. These digit cards have been placed incorrectly. Rearrange the digit cards so the statement makes sense.

$$\boxed{8} + \boxed{9} = \boxed{3} + \boxed{4}$$



PS

Reasoning and Problem Solving – Compare Number Sentences

7a. Find four different combination of numbers that will make this statement correct.

$$12 + 9 = \square + \square$$



PS

7b. Find four different combination of numbers that will make this statement correct.

$$17 + 6 = \square + \square$$



PS

8a. Ethan says,



16 + 8 is less than seventeen add nine

Do you agree with Ethan? Convince me.



R

8b. Milly says,



twenty add seven is more than 19 + 8

Do you agree with Milly? Convince me.



R

9a. These digit cards have been placed incorrectly. Rearrange the digit cards so the statement makes sense.

$$\boxed{13} + \boxed{9} > \boxed{14} + \boxed{8}$$



PS

9b. These digit cards have been placed incorrectly. Rearrange the digit cards so the statement makes sense.

$$\boxed{16} + \boxed{8} < \boxed{12} + \boxed{7}$$



PS

Reasoning and Problem Solving – Compare Number Sentences

Developing

- 1a. Various answers, for example: $0 + 7$, $1 + 6$, $2 + 5$, $3 + 4$ (or commutative sum)
1b. Various answers, for example: $0 + 9$, $1 + 8$, $2 + 7$, $3 + 6$, $4 + 5$
(or commutative sum)
2a. Jack is incorrect because both sums equal 10.
2b. Francesca is incorrect because $6 < 8$ ($4 + 2 = 6$ and $5 + 3 = 8$).
3a. Various answers, for example: $3 + 5 > 2 + 4$; $4 + 5 > 3 + 2$
3b. Various answers, for example: $1 + 0 < 7 + 6$; $6 + 0 < 7 + 1$

Expected

- 4a. Various answers, for example: $0 + 13$, $1 + 12$, $2 + 11$, $3 + 10$, $4 + 9$, $5 + 8$, $6 + 7$
(or commutative sum)
4b. Various answers, for example: $0 + 14$, $1 + 13$, $2 + 12$, $3 + 11$, $4 + 10$, $5 + 9$, $6 + 8$,
 $7 + 7$ (or commutative sum)
5a. Betty is incorrect because $15 = 15$ ($9 + 6 = 15$ and $8 + 7 = 15$)
5b. Ismail is incorrect because $13 = 13$ ($8 + 5 = 13$ and $9 + 4 = 13$)
6a. Various answers, for example: $6 + 7 > 5 + 4$; $7 + 5 > 6 + 4$
6b. Various answers, for example: $8 + 4 = 9 + 3$; $3 + 9 = 8 + 4$

Greater Depth

- 7a. Various answers, for example: $0 + 21$, $1 + 20$, $2 + 19$, $3 + 18$, $4 + 17$, $5 + 16$, $6 + 15$,
 $7 + 14$, $8 + 13$, $9 + 12$, $10 + 11$ (or commutative sum)
7b. Various answers, for example: $0 + 23$, $1 + 22$, $2 + 21$, $3 + 20$, $4 + 19$, $5 + 18$, $6 + 17$,
 $7 + 16$, $8 + 15$, $9 + 14$, $10 + 13$, $11 + 12$ (or commutative sum)
8a. Ethan is correct because $24 < 26$ ($16 + 8 = 24$ and $17 + 9 = 26$)
8b. Milly is incorrect because $27 = 27$ ($20 + 7 = 27$ and $19 + 8 = 27$)
9a. Various answers, for example: $13 + 14 > 9 + 8$; $14 + 9 > 13 + 8$
9b. Various answers, for example: $12 + 8 < 16 + 7$; $12 + 7 < 16 + 8$; $8 + 7 < 16 + 12$