Name: _____

Addition Properties

Commutative Property of Addition

You can add numbers in any order.

example: 2 + 3 + 7 = 12
7 + 3 + 2 = 12

2 + 3 + 7 = 7 + 3 + 2

Associative Property of Addition

You can group addends different ways, and the sum will not change. Addends are grouped with parenthesis. (You add the part in parenthesis first.)

example: (4 + 3) + 9 = 16
4 + (3 + 9) = 16

(4 + 3) + 9 = 4 + (3 + 9)

Part I: Find the missing numbers. Also, tell which property is used.

1. 9 + 5 = 5 + _____

property: _____

2. 2 + (4 + 10) = (2 + _____) + 10

property: _____

3. (4 + 11) + _____ = 4 + (11 + 7)

property: _____

4. 2 + _____ + 3 + 6 = 6 + 3 + 2 + 3

property: _____

Part II: Re-write each problem three different ways using the commutative property.

5. 1 + 2 + 3 + 4 = 10

_____

_____

_____

6. 9 + 8 + 1 = 18

_____

_____

_____

Part III: Change the position of the parenthesis to re-write each problem.

7. (7 + 10) + 2 = 19

_____

8. 4 + (5 + 2) = 11

_____

9. (3 + 6) + 6 = 15

_____

10. 10 + (4 + 1) = 15

_____

Part IV: Think and write.

11. Do you think there is a commutative property of subtraction? Tell why or why not.

_____

_____

12. The Cooper family has an apple tree in their backyard. Mrs. Cooper asked her children to pick some apples and bring them to the house so she can bake apple pies. The graph below shows how many apples each of her children picked.

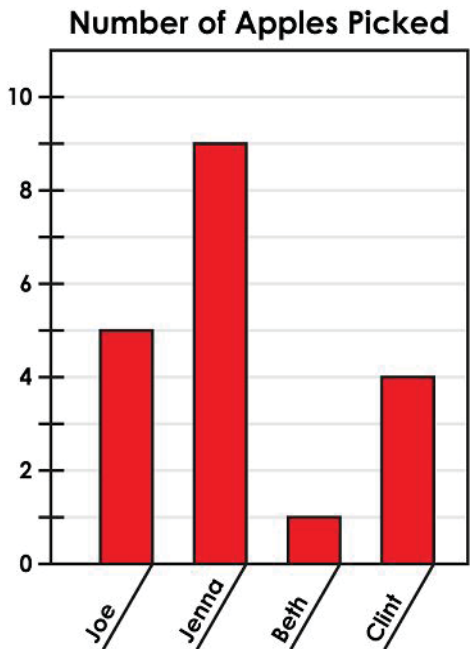
Use the commutative property of addition to write four different number sentences that show how many apples they picked in all.

_____

_____

_____

_____



ANSWER KEY

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example: (4 + 3) + 9 = 16
4 + (3 + 5) = 16

(4 + 3) + 9 = 4 + (3 + 9)

Part I: Find the missing numbers. Also, tell which property is used.

1. 9 + 5 = 5 + **9**

property: **commutative**

2. 2 + (4 + 10) = (2 + **4**) + 10

property: **associative**

3. (4 + 11) + **7** = 4 + (11 + 7)

property: **associative**

4. 2 + **3** + 3 + 6 = 6 + 3 + 2 + 3

property: **commutative**

Part II: Re-write each problem three different ways using the commutative property.

5. 1 + 2 + 3 + 4 = 10

2 + 3 + 4 + 1 = 10

3 + 4 + 2 + 3 = 10

4 + 1 + 2 + 3 = 10

(or any other combinations)

6. 9 + 8 + 1 = 18

8 + 9 + 1 = 18

8 + 1 + 9 = 18

1 + 8 + 9 = 18

(or any other combinations)

ANSWER KEY

Part III: Change the position of the parenthesis to re-write each problem.

7. (7 + 10) + 2 = 19

7 + (10 + 2) = 19

8. 4 + (5 + 2) = 11

(4 + 5) + 2 = 11

9. (3 + 6) + 6 = 15

3 + (6+ 6) = 15

10. 10 + (4 + 1) = 15

(10 + 4) + 1 = 15

Part IV: Think and write.

11. Do you think there is a commutative property of subtraction? Tell why or why not.

There is not a commutative property of subtraction. You should always subtract the smaller number from the larger number.

Also accept: If you change the position of the numbers in a subtraction problem, the answer changes.

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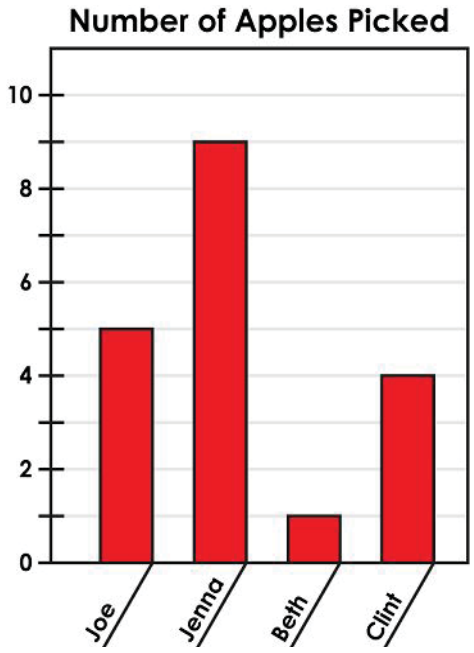
Use the commutative property of addition to write four different number sentences that show how many apples they picked in all.



5 + 9 + 1 + 4 = 19

9 + 1 + 4 + 5 = 19

4 + 1 + 5 + 9 = 19

1 + 5 + 9 + 4 = 19

(or any other combinations)