## **Determining Properties of Addition**

1. Fill in the blanks to make the equation true. Determine the property of addition you use to find the answer.

a. 
$$543 + \underline{\phantom{0}} = 734 + 543$$

b. 
$$657 + (\underline{\phantom{0}} + 342) = (657 + 459) + 342$$

c. 
$$\underline{\phantom{0}} + 0 = 456,798$$

d. 
$$(765 + 564) + \underline{\hspace{1cm}} = 765 + (564 + 348)$$

e. 
$$\underline{\phantom{0}}$$
 + 2,785 = 2,785 + 5,689

f. 
$$1,278 + (367 + \underline{\phantom{0}}) = (1,278 + 367) + 890$$

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- 2. Which of the following is true about Identity Property?
  - a. Changing the **grouping** of addends does not change the sum.
  - b. The sum of zero and any number is **that number**.
  - c. Changing the **order** of the addends does not change the sum.
- Solution:
- 3. Use the table and properties of addition to answer the following questions.
  - a. How many candies did Jane, Marie, and Rose have altogether?
  - b. How many candies did Marie, Anna, and Jane have altogether?
  - c. Jane and Anna paired in giving the candies to the street children. Marie and Rose formed another pair. Which pair had more candies?

Names	No. of Candies
Jane	328
Marie	256
Anna	423
Rose	347

Solution:

a.

b.

c.

4. Use the properties of addition to find the sum of the following.

a. 
$$(55 + 67) + (34 + 132)$$

$$d. (324 + 25) + 76$$

b. 
$$143 + 345 + 123$$

e. 
$$(77 + 243 + 56) + 276$$

c. 
$$45 + 435 + 64$$

$$f. 79,589 + 0$$

Solution: d.

e.

f. c.

5. Which of the following is an example of Associative Property of Addition?

a. 
$$345 + (615 + 745) = (745 + 345) + 615$$
 c.  $714 + 324 = 324 + 714$ 

c. 
$$714 + 324 = 324 + 714$$

Solution:

b.  $0 + 5{,}367 = 5{,}367$ 

d. 
$$453 + 89 + 132 = 89 + 132$$

6. Which of the following is an example of Commutative Property of Addition?

a. 
$$154 + (468 + 79) = 79 + (468 + 154)$$

c. 
$$500 + 0 = 500$$

b. 
$$756 + 489 + 143 = 489 + 143 + 756$$

d. 
$$60 + 40 + 55 = 100 + 55$$

Solution:

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Answer Key

1.

- a. 734 (Commutative Property)
- b. 459 (Associative Property)
- c. 456,798 (Identity Property)
- d. 348 (Associative Property)
- e. 5,689 (Commutative Property)
- f. 890 (Associative Property)
- 2. B
- 3.
- a. 931
- b. 1007
- c. Jane and Anna

4.

- a. 288
- b. 611
- c. 544
- d. 425
- e. 652
- f. 79,589
- 5. A
- 6. B