Answers and talk notes

Generate Equivalent Expressions

What your student is learning

Tonight we learn math rules called properties. They let us change the order or the grouping of numbers without changing the answer.

Answers

Ask your student to explain before you look.

1. **B.** 7 + 4 = 4 + 7. 7 + 4 = 4 + 7 swaps the order of the two numbers, and the sum stays 11.
2. **A.** 12. The Commutative Property lets 12 + 9 trade places to 9 + 12, so the blank is 12.
3. **D.** 0. The Identity Property says adding 0 leaves a number the same, so 48 + 0 = 48.
4. **C.** Associative Property. The grouping changed from (3 + 8) + 2 to 3 + (8 + 2), so this is the Associative Property.
5. **B.** 38. Regroup to make a friendly ten: (5 + 15) + 18 = 20 + 18 = 38.
6. **A.** 180. Swap and regroup: (4 × 5) × 9 = 20 × 9 = 180.

Talk about it

Which property did you use: did you change the order (Commutative) or the grouping (Associative)? Did the total change?

Home mission

Line up 3 forks, 5 spoons and 2 cups. Count them 3 + 5 + 2. Now start with the spoons. Does the total change? Then try 5 – 2 and 2 – 5 with spoons and cups. Which order works?

When they are stuck, ask

- Did the order of the numbers change, or did the parentheses move?
- Let's add both ways and see if we get the same total.
- Is this adding or multiplying? The properties only work for those two.

Try not to say

- Order never matters in math.
- If there are parentheses, it must be the commutative property.
- You can switch the order in subtraction too.