



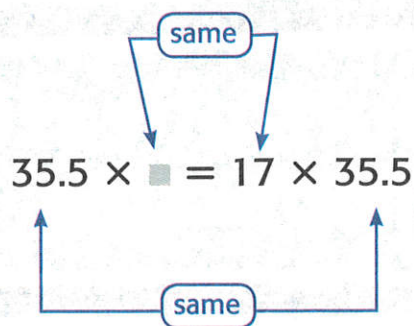
Example 2

Find the unknown in the equation

$$35.5 \times \blacksquare = 17 \times 35.5.$$

The **Commutative Property of Multiplication** shows that the order in which factors are multiplied does not change the product.

So, the unknown is _____.

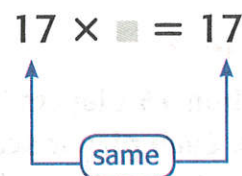


Example 3

Find the unknown in the equation $17 \times \blacksquare = 17$.

The **Identity Property of Multiplication** states that the product of any factor and 1 equals the factor.

So, the unknown is _____.



Guided Practice

Draw lines to match the multiplication property used in each equation.

1. $6.2 \times 100 = 100 \times 6.2$

• Identity Property

2. $(8 \times 2) \times 3 = 8 \times (2 \times 3)$

• Commutative Property

3. $78.56 \times 1 = 78.56$

• Associative Property

Talk MATH

Explain how you could use mental math and multiplication properties to find $(5.5 \times 50) \times 2$.



Independent Practice

Use properties of multiplication to find each product mentally. Show your steps and identify the properties that you used.

4. $(5.1 \times 2) \times 50 =$ _____

5. $4 \times (2.5 \times 6) =$ _____

6. $(9.8 \times 500) \times 2 =$ _____

7. $(1.4 \times 50) \times 20 =$ _____

Mathematical PRACTICE 2

Use Algebra Find the unknown in each equation. Circle which property you used.

8. $19.5 \times \blacksquare = 19.5$

$\blacksquare =$ _____

Commutative Property

Associative Property

Identity Property

9. $34 \times 65 = 65 \times \blacksquare$

$\blacksquare =$ _____

Commutative Property

Associative Property

Identity Property

10. $2.1 \times \blacksquare = 4.3 \times 2.1$

$\blacksquare =$ _____

Commutative Property

Associative Property

Identity Property

11. $(17 \times 2) \times 5 = 17 \times (\blacksquare \times 5)$

$\blacksquare =$ _____

Commutative Property

Associative Property

Identity Property



Problem Solving

12. Elijah and 2 of his friends are each paid \$20 per afternoon for stuffing envelopes. If they work 5 afternoons, what is the total amount of their earnings?

13. Replace the ■ in $(8.7 \times \blacksquare) \times 5$ with a number greater than 10 so that the product is easy to find mentally. Explain.

14. **Mathematical PRACTICE 3** **Draw a Conclusion** Each juice box contains 6.4 ounces. Each value pack of juice holds 10 juice boxes. If you have fifty value packs, how many ounces of juice do you have?

HOT Problems

15. **Mathematical PRACTICE 2** **Use Number Sense** Which two properties can you use to find $(3.4 \times 4) \times (25 \times 1)$ mentally? Explain. Remember that the parentheses tell you which factors to multiply first.

16. **?** **Building on the Essential Question** How do the multiplication properties help me to find products mentally?

My Work!

