

In 1-8, state the property that is being illustrated. (Use the 1st 7 properties from today's class notes, the commutative property is used twice)

1. $5(x-2) = 5x - 10$

Distributive Property

2. $7 + 0 = 7$

Additive Identity

3. $\frac{3}{4} \times \frac{4}{3} = 1$

Multiplicative Inverse

4. $(7+x) + 2 = 7 + (x+2)$

Associative Property of Addition

5. $9 + (-9) = 0$

Additive Inverse

6. $-8 \times 1 = -8$

Multiplicative Identity

7. $9 \times 2 = 2 \times 9$

Commutative Property of Multiplication

8. $(6 \times 4) \times 2 = 2 \times (6 \times 4)$

Commutative Property of Multiplication

9. Place an X in the box for each set the number belongs.

Number	Natural	Whole	Integer	Rational	Irrational	Real
-8			X	X		X
$\frac{5}{6}$				X		X
4	X	X	X	X		X
0		X	X	X		X
$-2\frac{1}{2}$				X		X
$\sqrt{14}$					X	X
0.35				X		X
0.777...				X		X
$\sqrt{81}$	X	X	X	X		X
$-\frac{5}{9}$				X		X
7.3				X		X
$0.\bar{2}$				X		X
$-\sqrt{25}$			X	X		X

10. What is the difference between an algebraic expression and an algebraic equation?

An algebraic equation has an “equals sign.”

In 11-14, state the value of x that would make the expression undefined.

11. $\frac{9}{x+4}$ **-4** 12. $\frac{1}{x-6}$ **6** 13. $\frac{x-7}{2-x}$ **2** 14. $\frac{x-4}{(x-5)(x+2)}$ **5 or -2**

15. Will Hunting stated that the expression $\frac{x-4}{4}$ will never be undefined, and John Nash thought it would be undefined when $x = 4$. Who is right, and why?

Will is correct, an expression is undefined, only when the denominator (bottom) is equal to zero. This expression DOES NOT have a variable in the denominator, as a result, it will never be undefined.

16. Which equation illustrates the associative property?

[1] $x+y+z = x+y+z$ [2] $x(y+z) = xy+xz$
[3] $x+y+z = z+y+x$ [4] $(x+y)+z = x+(y+z)$

17. Chad complained to his friend that he had five equations to solve for homework. Are all of the homework problems equations? Justify your answer.

No, question number 3 is an expression instead of an equation. Equations have an equal sign.

Math Homework

1. $5xy^2 = 3y$
2. $5x = 10$
3. $3x^2 \cdot$
4. $2x - 3 = 17$
5. $x^2 - 2x - 8 = 0$

Name Chad