Algebra 2 (Honors)

Section 1.5: Solving Equations

Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Objectives**: Students will solve problems by writing and solving linear equations algebraically and graphically.

|  |  |
| --- | --- |
| **Main Idea** | **Notes** |
| **No Dow (Example 1): Solving Equations by Graphing** | Solve by graphing: |
| **Vocabulary: Summary of the Steps Used to Solve Equations by Using the Graphing Calculator** | Step 1: Graph the two equations, one representing the left side and one representing the right side.Step 2: Find the point of intersection.2nd 🡪 CALC🡪 5:intersectGo to the first line near the point of intersection and press ENTER.Go to the second line near the point of intersection and press ENTER.Then press ENTER again.Step 3: If we are solving for x, use the first value in the point of intersection. That is your answer!Now solve the following equations using your graphing calculator:How do these answers compare to the answers from the “Do Now”? |
| **Practice:** | Solve each equation by graphing by hand. Then, check your answer using the graphing calculator.1. 2.

 |
| **Vocabulary: Properties of Equality** | Equations can also be solved algebraically using the following properties:***Properties of Equality***Addition: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Subtraction: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Multiplication: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Division: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| **Example 2:** **Solving Equations Algebraically** | The equation relating Celsius and Fahrenheit temperatures is F = C + 32.Find the degrees Celsius equal to 122°F.1. Solve the equation graphically using the graphing calculator.
2. Solve the equation algebraically
 |
| **Vocabulary: The Distributive Property****Vocabulary: Equivalence** | For any real numbers a, b, and c,\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Equivalent:Equivalent Equations:Substitution property:Examples of Equivalent Equations: |
| **Example 3: Solving Equations Using Substitution****Example 4: Solving Equations Using Substitution** | Given that *y = 4 – 2x*, solve *3x + 5y = 6* for x and y. Given that *x = 3y – 1*, solve *5x – 2y = 21*  for x and y.  |
| **Example 5: Solving a Literal Equation** | Given the equation V = , solve for h in terms of V and b. |
| **Homework:**  |  |