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| **Day 1 Homework: Rational Exponents** |



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| **Day 2 Homework: Solving Radical Equations** |

Solve the following for x using the notes from the video! You may work with your peers. **Be sure to check for extraneous solutions!** Show all your work on a separate sheet of paper.

1. 
2.  + 2 = *x*
3. 
4. 
5. ****
6. ****
7. ****
8. ****
9. ****
10. ****
11. ****
12. ****

13. The number of people, y, involved in recycling in a community is modeled by the function, where *x* is the number of months the recycling plant has been open.

1. Find the number of people involved in recycling exactly 3 months after the plant opened.
2. After how many months will 940 people be involved in recycling?

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| **Day 3 Homework: Graphing Radical Functions** |









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| **Day 4 Homework: Applications of Radical Functions** |





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| **Day 5 Homework: Direct and Inverse Variation** |

**Find the Missing Variable:**

1. y varies directly with x. If y = -4 when x = 2, find y when x = -6.
2. y varies inversely with x. If y = 40 when x = 16, find x when y = -5.
3. y varies inversely with x. If y = 7 when x = -4, find y when x = 5.
4. y varies directly with x. If y = 15 when x = -18, find y when x = 1.6.

**Classify the following as: a) Direct b) Inverse c) Neither**

 5) m = -5p 6) c = 3v 7) r = 

8) n = ½ f 9) d = 4t 10) z = 

**What is the constant of variation for the following?**

11) d = 4t 12) z =  13) n = ½ f 14) r = 

**Answer the following questions.**

18) If x and y vary directly, as x decreases, what happens to the value of y?

19) If x and y vary inversely, as y increases, what happens to the value of x?

**Answer the following questions:**

20) The electric current I, is amperes, in a circuit varies directly as the voltage V. When 12 volts are applied, the current is 4 amperes. What is the current when 18 volts are applied?

21) The volume V of gas varies inversely to the pressure P. The volume of a gas is 200 cm3 under pressure of 32 kg/cm2. What will be its volume under pressure of 40 kg/cm2?

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| **Day 6 Homework: Solving Rational Functions** |

**Determine whether the given x-value is a solution of the equation:**

1.  2. 

**Solve the rational equations by cross multiplying. Be sure to check for extraneous solutions!**

3.  4.  5. 

6.  7.  8. 

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| **Day 7 Homework: Graphing Rational Functions** |







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| **Day 8: Graphing and Systems** |

Solve each system. Then represent the solution on a graph. Label any key points. 

1. 



1. 
2. 
3. 