1. *How are whole numbers and integers similar? How are they different?*

*Can you provide examples of integers that are not whole numbers?*

*What about whole numbers that are not integers?*

2. *Discuss the differences between rational and irrational numbers.*

*Are all rational numbers integers? Are all integers rational numbers?*

*Provide examples and/or counter examples to support your response.*

3. *Discuss how to convert between mixed numbers and improper fractions.*

4. *Are all square roots rational? Explain.*

*How can you tell if a square root is imaginary?*

5. *Discuss the processes of adding/subtracting, multiplying, and dividing fractions.*

*How are they similar? How are the different? Can you provide some examples?*

*Feel free to represent your thoughts using pictures!*

6. *One specific operation is undefined. Which specific operation is this, and why is it undefined?*

7. *Discuss absolute value and how to use absolute value. Provide examples as necessary.*

8. *Discuss the order of operations. Provide examples as necessary.*

9. *Discuss how you can determine an algebraic expression, equation, or inequality based on key words in any given situation. What are some key words you can look for, and what do they represent?*

10. *Discuss how to solve any given proportion.*

11. *Discuss how to convert between decimals and percentages. Why may this be important in your life?*

12. *Discuss what happens when solving equations that have no solution. What about equations that have infinitely many solutions? How are these situations different? How are they the same?*

13. *Discuss any important reminders for solving inequalities.*

14. *What is the common error in simplifying (A + B)2 to A2 + B2*? *Why is this incorrect, and what is the correct way to simplify this expression?*

15. *Discuss slope. How can you determine a slope given…:*

*two points?*

*an equation?*

*a graph?*

16. *What can you say about vertical lines in terms of the points that lie on them and their slopes?*

*What can you say about horizontal lines in terms of the points that lie on them and their slopes?*

17. *How can you determine the y-intercept of any equation? What about the x-intercept?*

*How can you determine the x-intercept and y-intercept of a graph of any function, even if you are not given the equation?*

18. *Discuss the relationship between parallel lines, as well as the relationship between perpendicular lines.*

19. *Discuss how to factor an expression that has three terms. What if the middle term is missing?*

20. *Discuss how to graph a line given its equation.*

*Also, how can you tell if a line is vertical, horizontal, or neither?*

21. *Discuss how to solve an equation like (x – 2)(x + 1)(x + 4) = 0.*

22. *Discuss how to simplify expressions using exponents. What can you do if you forget the “rules?”*

*Also, what does an exponent of 0 represent?*

*What does a negative exponent represent?*

23. *Discuss and quiz each other on the perfect squares from 12 to 202,*

*as well as the perfect cubes from 13 to 103.*

*(Knowing these by heart will make your experiences with math MUCH more smooth and enjoyable!)*

24. *Discuss how to determine the square root of xN where Nis an even integer.*