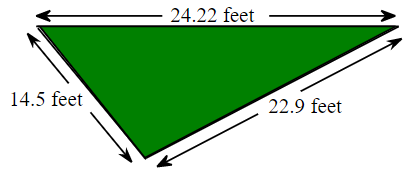
Final Exam

Foundations of College Algebra

1. Simplify.
2. Find the prime factorization of the following number. Write any repeated factors using exponents.
3. Multiply. Write the answer in simplest form. (That is, as a fraction.)
4. Divide. Write your answer in simplest form. (That is, as a fraction.)
5. Add and simplify. Write your answer as a fraction.
6. A landscape architect is planning a border for a flower garden shaped like a triangle. The sides of the garden measure 14.5 feet, 24.22 feet, and 22.9 feet. Find the amount of border material needed.  
   
7. A self-tanning lotion advertises that a 3-oz bottle will provide four applications. Jen found a great deal on a 19-oz bottle of the self-tanning lotion she had been using. Based on the advertising claims, how many applications of the self-tanner should Jen expect? Round your answer down to the nearest whole number.
8. In 1999, total revenue of a company from music sales and licensing was $14.6 billion. It was forecasted that this number would continue to drop until it reached $5.7 billion in 2014. Find this percent decrease in music revenue. Round your answer to the nearest tenth as needed.
9. The sales tax is $142.20 on a stereo sound system purchase of $1580. Find the sales tax rate.
10. Find the hypotenuse of a right triangle with legs of length 16 units and 25 units. Round your answer to the nearest thousandth as needed.
11. Decide whether the given number is a solution of the given equation.
12. Solve the equation.
13. Solve the equation.
14. Solve the equation.
15. Solve the inequality.
16. Graph the linear equation.  
    Chart, line chart

    Description automatically generated
17. Write an equation of the line with the given slope, , and -intercept .
18. Use the product rule to simplify the expression. Write the results using exponents.
19. Subtract.
20. Multiply using the FOIL method.
21. Factor the trinomial completely.
22. Solve the equation.