Week Two Supplement 2.4 and 2.5 (2.3 is on week one’s supplement)

ELG A.1: Interpret complicated expressions by analyzing structures of expressions to solve equations.

1. In the relationship w varies directly with t with a constant variation of 5. Write an equation that represents this.
2. In the relationship s varies inversely with p with a constant 15. Write an equation that represents this.
3. Solve each equation
   1. 14 = 3.5x c.
   2. 8x = 45(0.62) d.
4. The equation c = 1.25f shows the direct variation relationship between the length of fabric and its cost. The variable f represents the length of the fabric in yards, and c represents the cost in dollars. Use the equation to answer these questions.
   1. How much does 2 and a half yards cost?
   2. How much fabric can you buy for $5?

* 1. What is the cost of each additional yard of fabric?

1. Rewrite each equation in Y = form.
   1. xy = 15 c. xy = 3
   2. xy = 35
2. Find five points that satisfy the inverse variation equation .
3. Henry noticed that the more TV he watched, the less time he spent doing homework. One night he spent 1.5 hours watching TV and 1.5 hours doing homework. Another night he spent 2 hours watching TV and only 1 hour doing homework. To try and catch up, the next night he spend only a half an hour watching TV and 2.5 hours doing homework. Is this an inverse variation? Explain why or why not.
4. The amount of time it takes to travel a given distance is inversely proportional to how fast you travel.
   1. How long would it take to travel 90 mi at 30 mi/h?
   2. How long would it take to travel 90 mi at 45 mi/h?
   3. How fast would you have to go to travel 90 mi in 1.5 h?