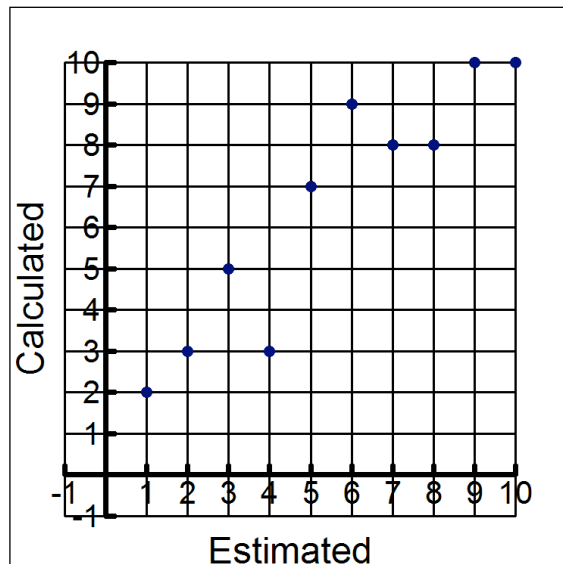
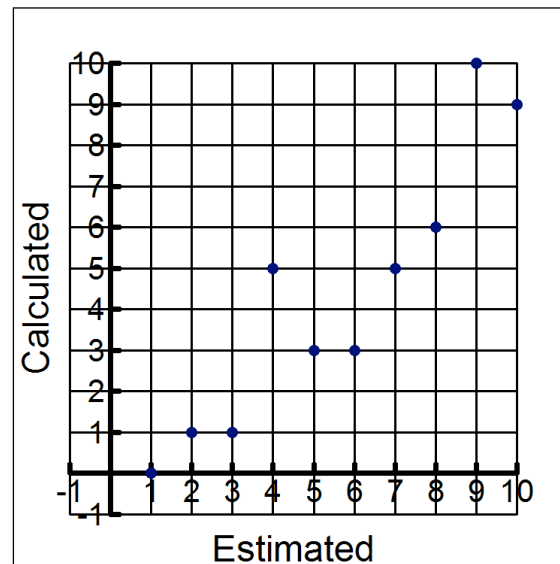
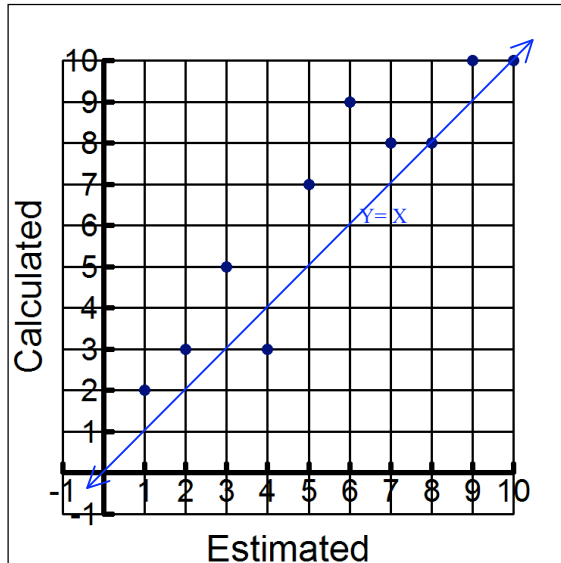


TASK 2.1.3: OVER OR UNDER?**Solutions****Graph 1****Graph 2**

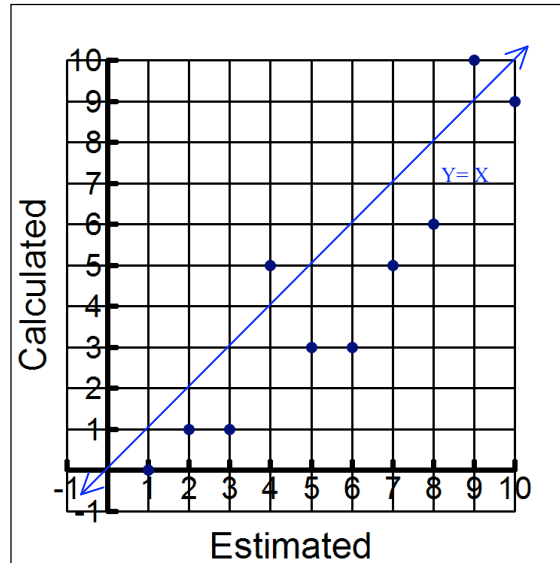
1. For graph #1, what is the independent variable? dependent variable?
Estimated; Calculated
2. For graph #2, what is the independent variable? dependent variable?
Estimated; Calculated
3. For graph #1, what is the domain? range? Domain = $\{1, 2, \dots, 10\}$;
Range = $\{2, 3, 5, 7, 8, 9, 10\}$
4. For graph #2, what is the domain? range? Domain = $\{1, 2, \dots, 10\}$;
Range = $\{0, 1, 3, 5, 6, 9, 10\}$

5. For each graph above, sketch in the “perfect estimation” line and label it appropriately.

Graph 1



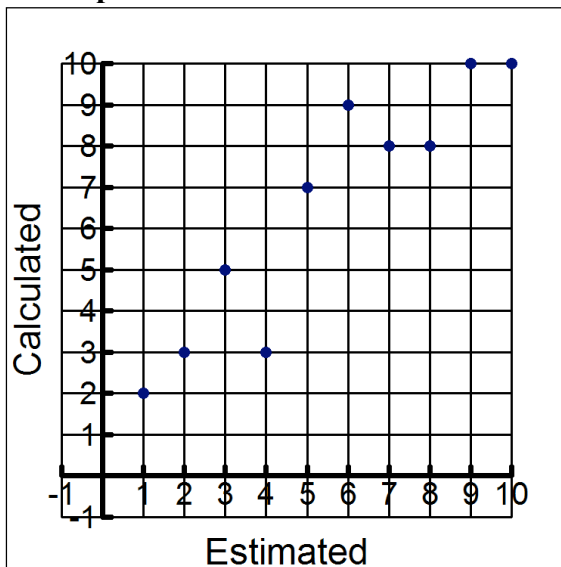
Graph 2



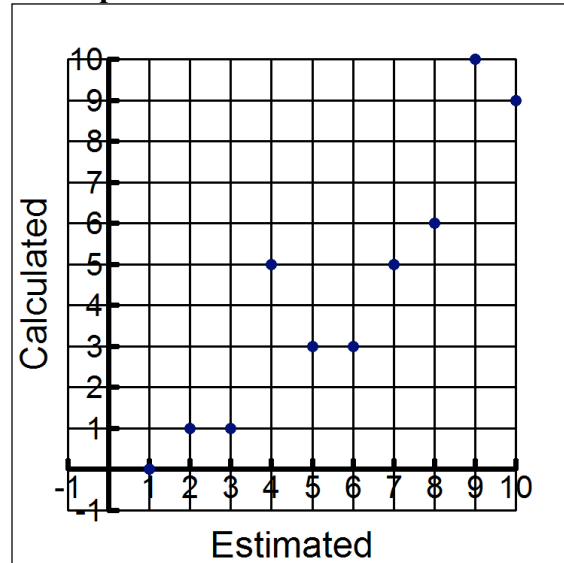
6. For graph #1, did the person overestimate or underestimate? Explain.
 Most of the points are above the line, which indicates that the estimated perimeter is less than the calculated perimeter, thus perimeter was estimated too small in most cases.
7. For graph #2, did the person overestimate or underestimate? Explain.
 Most of the points are below the line, which indicates that the estimated perimeter is greater than the calculated perimeter, thus the perimeter that was estimated was too large in most cases.
8. Is the relationship between estimated and calculated a proportional relationship? Is it a direct variation? Justify your answers.
 Unless the estimated is “perfect”, the data is not proportional nor is there a direct variation. Only with a perfect estimation will the line include the origin.

TASK 2.1.3: OVER OR UNDER?

Graph 1



Graph 2



1. For graph #1, what is the independent variable? dependent variable?
2. For graph #2, what is the independent variable? dependent variable?
3. For graph #1, what is the domain? range?
4. For graph #2, what is the domain? range?
5. For each graph above, sketch in the “perfect estimation” line and label it appropriately.
6. For graph #1, did the person overestimate or underestimate? Explain.
7. For graph #2, did the person overestimate or underestimate? Explain.
8. Is the relationship between estimated and calculated a proportional relationship? Is it a direct variation? Justify your answers.