Gregory reported his mood as, "I have never been this way before. I am interested in knowing what is wrong." His behavior was appropriate for the testing situation. He was both friendly and polite.

During testing, Gregory appeared to focus on each test appropriately and put forth his best effort. Formal testing was conducted to establish that Gregory exerted optimal effort during testing. There was no evidence of symptom exaggeration or motivational impairment on the psychometric test administered. On the Matrix Reasoning subtest, he had to focus hard, took a long time to determine an answer, and he would commonly say that the answer choices were wrong and they needed to be switched around in order to fit the pattern. Gregory had to focus hard on tasks that assessed his short-term memories of numbers. On Verbal Comprehension subtests, Gregory was well spoken but typically could not find the words to explain what he wanted to say. Overall, Gregory was cooperative with the testing procedures and seemed to perform to the best of his ability. Thus, the results of this evaluation should be considered both a valid and reliable estimate of his true intellectual ability.

ASESSMENT RESULTS:

Overall Intellectual Functioning (IQ): On tests of intelligence, Gregory earned scores between the Below Average to High Average ranges. He earned a WAIS-IV Full Scale IQ of 98, which places him in the Average range of intellectual functioning compared to his age-matched peers, and is ranked in the 45th percentile. There is a 95% chance that Gregory's true Full Scale IQ falls within the range of 94 to 102. This means 95 times out of 100 he would obtain a score between 94 and 102.

Overall, Gregory scored the highest on tasks involving verbal comprehension skills and lowest on tasks involving working memory and perceptual reasoning skills. He exhibited a relative strength in the ability to process verbal information, think with words, and retrieve information from long-term memory. He also possesses a wide range of general information, and crystallized knowledge. He exhibited a relative weakness on tasks that involved working memory and perceptual reasoning. The possible implications of low scores on the working memory domain are poor auditory short-term memory and poor ability to sustain attention and concentrate. The possible implications of low scores on the perceptual reasoning domain are poor spatial ability and visual-perceptual organization. This discrepancy suggests that although Gregory did not score below the Average on any of the four main domain scores, his verbal comprehension skills are better than his working memory skills. This means Gregory has a very superior ability to comprehend verbal information; however, he has a more difficult time concentrating, sustaining his attention, interpreting and organizing visually perceived material quickly, and using his short-term memory.

Verbal Comprehension (VCI) Skills: This domain assesses a patient's crystallized knowledge, comprehension abilities, retrieval of material from long-term memory, and reasoning ability.

Gregory obtained a VCI score of 105, with a range of 99 to 110. His VCI places him at the 63rd percentile compared to aged-matched peers and falls within the Average range. There was a significant difference between his verbal comprehension, perceptual reasoning, and working memory skills. This indicates that his verbal comprehension skills are better developed than his other skills and are a relative strength for Gregory, although still within the average range of scores. There were no significant strengths or weaknesses in his pattern of scores across the different verbal comprehension subtests.

Perceptual Reasoning (PRI) Skills: This domain assesses a patient's perceptual reasoning skills and reflects their ability to interpret or organize visually perceived material and use nonverbal intelligence to reason through it. Tests of this domain are typically timed.

Gregory obtained a PRI score of 94, with a range of 88 to 101. His PRI score places him at the 34th percentile compared to aged-matched peers and falls within the Average range. There was a significant difference between his perceptual reasoning and verbal comprehension skills. This indicates his verbal comprehension skills are better than his perceptual reasoning skills. A strength was found on one of the perceptual reasoning subtests. This indicates that Gregory has good visual-perceptual reasoning and attention to detail.

Working Memory (WMI) Skills: This domain assesses a patient's auditory short-term memory, working memory, immediate auditory recall, ability to focus, and ability to concentrate.

Gregory obtained a WMI score of 92, with a range of 86 to 99. His WMI score places him at the 30th percentile compared to aged-matched peers and falls within the Average range. There was a significant difference between his working memory skills and verbal comprehension skills. This indicates his working memory skills are weaker than his verbal comprehension skills. A weakness was found on one of the working memory subtests. This weakness indicates that he may have a poor visual-perceptual reasoning, visual-perceptual organization, and visual-spatial construction ability under time pressure.

Processing Speed (PSI) Skills: This domain assesses a patient's ability to respond rapidly to information, to scan information, and use short-term visual memory skills.

Gregory obtained a PSI score of 98, with a range of 94 to 102. His PSI score places him at the 45th percentile compared to age-matched peers and falls within the Average range. There were no significant differences found between his PSI score and his other domain scores. There were also no significant strengths or weaknesses in his pattern of scores across the different processing speed subtests.

The following table summarizes Gregory's WAIS-IV scores:

	Test or Construct	Raw Score	Scaled Score	Percentile Rank	Classification
	INTELLECTUAL ABILITY				
WAIS-IV	Block Design	24	6	9	Below Average
	Similarities	29	11	63	Average
	Digit Span	25	8	25	Low Average
	Matrix Reasoning	22	13	84	High Average
	Vocabulary	42	11	63	Average
	Arithmetic	13	9	37	Average
	Symbol Search	30	9	37	Average
	Visual Puzzles	12	8	25	Low Average
	Information	16	11	63	Average
	Coding	76	11	63	Average
	Letter-Number Sequencing	20	10	50	Average
	Full Scale IQ	97	98	45	Average
	Verbal-Comprehension Index	33	105	63	Average
	Perceptual Reasoning Index	27	94	34	Average
	Working Memory Index	17	92	30	Average
	Processing Speed Index	20	100	50	Average

Academic Achievement: On a screening battery assessing academic achievement, Gregory earned scores in the Above Average to Below Average performance ranges. He earned a WIAT-II Reading Composite Score of 112, which is ranked in the 79th percentile. This means that his score on this subscale was higher than or equal to 79% of scores for other males in his age group included in the normative sample. His scores on the other achievement domains were 88 for Math Computation (21st percentile) and 99 for Spelling (47th percentile). Gregory's Math Computation Composite Score is different from what is expected based on his FSIQ score on the WAIS-IV. Approximately 5 to 10% of adults might have the same level of discrepancy as Gregory obtained between his FSIQ score and WIAT-II Math Computation Composite Score.

Inspection of Gregory's standard score confidence intervals shows that the standard scores on the math subtests and the Mathematics Composite all overlap. Gregory scored the highest on tasks involving math reasoning. His

score on math reasoning was in the Average performance range and is ranked in the 27th percentile. Gregory scored lowest on numerical operations. His score on numerical operation was in the Below Average range of performance and is ranked in the 18th percentile. This suggests he is better able to solve single and multi-step word problems than solve simple equations involving all basic operations. His math performance on the WAIS-IV was slightly better than his math performance on the WIAT-II. His WAIS-IV Arithmetic subtest score fell in the 37th percentile and Average performance range.

	Test or Construct	Raw Score	Scaled Score	Percentile Rank	Classification
	ACADEMIC ACHIEVEMENT				
WIAT-II	Word Reading	126	105	63	Average
	Reading Comprehension	221	115	84	Above Average
	Pseudoword Decoding	51	109	73	Average
	Numerical Operations	29	86	18	Below Average
	Math Reasoning	53	91	27	Average
	Spelling	44	99	47	Average
	Reading Composite	329	112	79	Above Average
	Mathematics Composite	177	88	21	Below Average
	Overall Battery Mean	--	101	53	Average

Reading Skills: On a battery assessing phonological processing and word reading efficiency, Gregory earned scores between the Very Poor and Above Average performance ranges. On the two tests of reading efficiency, Sight Word Efficiency and Phonemic Decoding Efficiency, Gregory scored in the Average performance range. This means that the possibility for deficits in these reading efficiency areas is not indicated. His average composite score for the Rapid Naming Index was 120, which is in the 90th percentile and ranked in the Above Average performance range. This suggests he is good at retrieving phonological information from his long-term memory and executing a sequence of operations quickly. His composite score for the Phonological Memory Index was 112, which is in the 79th percentile and ranked in the Above Average performance range. This suggests he is good at coding information phonologically for temporary storage in working or short-term memory. His composite score for the Phonological Awareness Index was 67, which is in the 1st percentile and ranked in the Very Poor performance range. This suggests that Gregory struggles in understanding the phonological structure of oral language. In particular, he has trouble removing phonological segments from spoken words to form other words, synthesizing sounds to form words, and saying phonemes in reverse order to form a word. Although his scores for the Phonological Awareness index are low, his scores on the other tests of his reading ability (WIAT-II, TOWRE, CTOPP) suggest that his reading ability may be at the level one might expect according to his cognitive ability.

	Test or Construct	Raw Score	Scaled Score	Percentile Rank	Classification
	READING SKILLS				
CTOPP	Elison	7	3	1	Very Poor
	Blending Words	10	6	9	Below Average
	Memory for Digits	18	13	84	Above Average
	Rapid Letter Naming	22	11	63	Average
	Nonword Repetition	14	10	50	Average
	Rapid Digit Naming	21	12	75	Average
	Rapid Color Naming	24	20	>99	Very Superior
	Phoneme Reversal	5	6	9	Below Average
	Rapid Object Naming	42	9	37	Average
	Blending Nonwords	10	9	37	Average

	Segmenting Words	7	11	16	Average
	Segmenting Nonwords	11	8	25	Average
	Phonological Awareness Index	9	67	1	Very Poor
	Alternate Phonological Awareness Index	17	91	27	Average
	Mean Phonological Awareness Index Score	13	79	8	Below Average
	Rapid Naming Index	22	112	79	Above Average
	Alternate Rapid Naming Index	29	127	97	Very Superior
	Mean Rapid Naming Index Score	26	120	88	Above Average
	Phonological Memory Index	24	112	79	Above Average
TOWRE	Sight Word Reading Efficiency (A)	90	91	27	Average
	Sight Word Reading Efficiency (B)	91	92	29	Average
	Phonemic Decoding Efficiency (A)	52	95	36	Average
	Phonemic Decoding Efficiency (B)	55	98	45	Average
	Mean Overall Word Reading Efficiency	188	93	32	Average

Behavioral Assessment: A few instruments were used to gather information from this area, which included ratings from the evaluator, a discussion between the evaluator and Gregory, and Gregory on a self-report rating scale.

On the ADHD self-report rating scale completed by Gregory, his scores varied between the Slightly Above Average and Above Average performance ranges. On the subscale of DSM-IV Total ADHD Symptoms, his score was in the Slightly Above Average range. The T score for DSM-IV Total ADHD Symptoms was 57, which indicates his score on this subscale was at the 89th percentile of scores for other males in his age group included in the normative sample. More specifically, this means that Gregory reported some symptoms that meet the criteria for and ADHD diagnosis. On the subscale of DSM-IV Inattentive Symptoms, his score was in the Above Average range. The T score for DSM-IV Inattentive Symptoms was 61, which indicates his score on this subscale was at the 89th percentile of scores for other males in his age group included in the normative sample. This means he reported having symptoms typically associated with the inattentive subtype of ADHD, as described in the DSM-IV. Finally, on the subscale of Problems with Self-Concept, his score was in the Slightly Above Average range. The T score for the subscale of Problems with Self-Concept was 56, which indicates his score on this subscale was at the 72nd percentile of scores for other males in his age group included in the normative sample. This means that he reports having poor social relationships, low self-esteem, and low self-confidence.

These findings are not consistent with the symptoms Gregory checked on the personal history questionnaire and reported during the clinical interview. These findings are consistent with areas with which he had trouble on the IQ assessment. The domains he scored lower in (working memory, processing speed, and perceptual reasoning) all involve attention and concentration abilities. However, there was not a large enough discrepancy between his Working Memory Index score and Processing Speed Index score to be concerned about these findings.

	Test or Construct	Raw Score	*T* Score	Percentile Rank	Classification
	BEHAVIORAL ASSESSMENT				
CAARS-S:L	Inattention/Memory Problems	7	44	16	Slightly Below Average
	Hyperactivity/Restlessness	9	44	17	Slightly Below Average
	Impulsivity/Emotional Lability	6	43	20	Slightly Below Average
	Problems with Self-Concept	8	56	72	Slightly Above Average
	DSM-IV Inattentive Symptoms	10	61	89	Above Average
	DSM-IV Hyperactive-Impulsive Symptoms	7	49	59	Average
	DSM-IV ADHD Symptoms Total	7	57	89	Slightly Above Average
	ADHD Index	12	53	53	Average

SUMMARY AND RECOMMENDATIONS: In response to specific referral questions:

1. What are his cognitive strengths and weaknesses?

Gregory's intellectual functioning appears to be in the Average range as measured by the WAIS-IV, which places him in the 45th percentile compared to his peers. His achievement ability for reading was between the Average and Above Average performance ranges as measured by the WIAT-II. His achievement ability for math was between the Average and Below Average performance ranges as measured by the WIAT-II. In contrast to his other abilities, he demonstrated strengths in verbal comprehension, reading comprehension, and rapidly naming of objects and words. He has a more difficult time on tasks requiring math skills, numerical operations, fluid reasoning, short-term memory, and the use of phonemes. Some of the evaluation procedures showed a pattern of symptoms commonly associated with Attention-Deficit Hyperactivity Disorder (ADHD). These symptoms included difficulty sustaining attention, inattention problems, difficulty concentrating, and difficulty using his short-term memory. However, these patterns were not consistent enough across all evaluation procedures to justify a diagnosis of ADHD at this time. Gregory might benefit from learning ways to reduce distractions in order to improve his ability to concentrate and attend to the task he is performing. Additionally, Gregory showed some signs of a reading disability. In particular, his low scores on tests of phonological awareness were of concern. However, because of his scores on the other tests of reading ability (WAIS-IV, WIAT-II, TOWRE), it is believed that Gregory's reading abilities are at the level one might expect according to his cognitive ability. His low score on phonological awareness suggests that he is able to read to the degree expected but he may not understand how to segment the sounds that make up a word.

2. Based on his pattern of test scores, is he experiencing cognitive impairment?

Based on the information obtained during the present evaluation, it is believed that Gregory is suffering from a Mathematics Disorder (DSM-IV, 315.1). He mostly scored in the Below Average performance range on the mathematics subtests of the WIAT-II and he scored in the Low Average range on the arithmetic portion of the WAIS-IV. Additionally, Gregory reported difficulty in math in both high school and college. He indicated that his mathematical ability has prevented him being able to complete his college studies. Overall, his mathematical ability as measured by standardized tests are substantially below what one might expect based on Gregory's age, measured intelligence, and education level.

3. If impairment is found, what is causing it?

Further testing into Gregory's emotional and personal issues may be needed to understand what is causing his current cognitive impairment. On the CAARS self-report form, Gregory's responses indicated some problems with self-concept. In addition, he indicated distress at night when his mind will "not cut off." Further testing of emotional and personal issues might shed more light on these symptoms. Additionally, Gregory reported that during the 4th grade he moved from an "all black" school to an "all white" school. He reported that after this move he was "always playing catch up." Therefore, a potential cause of his Mathematics Disorder may be poor training in foundational math skills. Overall, for a better understanding of the "cause" it would be helpful to have a more information related to his emotional status and personality dynamics.

4. If impairment is present, is it limiting his functioning such that he needs accommodation?

At this time, it does not seem that Gregory needs accommodation for his Mathematics Disorder. Further comprehensive testing of his math abilities would be needed before such a decision could be made. It should be noted that there is a difference between remediation and compensation. When considering his age, we must recognize that he has functioned within this domain for quite some time. Therefore, learning skills to help him cope with his Mathematics Disorder would probably be more beneficial for Gregory than trying to remediate the problem.

The following recommendations may prove helpful for Gregory: