**Grade 8 Justin Joins a Gym – Training Set 2 Annotations**

**T2-1 Score 2**

Part A: The student did not identify the slope and the *y*-intercept. The explanations provided for the slope and the *y*-intercept (*the slope is the fee to join and the y-intercept is the monthly rate*) are incorrect. [0 points]

Part B: The student provided the correct answer (*Justin saves $20 the first month*). While support is not required for Part B, the student likely calculated the regular price and the discounted price for the first month by substituting 1 for *x* in each equation, solving both equations for *y*, and subtracting the two values. [1 point]

Part C: The student provided a correct and complete explanation as to why the point ( –3, –25) is not a possible solution in the given situation (*because Justin cannot go to the gym for negative months*). The student correctly identified that negative numbers in this context are not realistic. [1 point]

**T2-2 Score 3**

Part A: The student correctly identified the slope (*The slope is ten*) and explained what the slope represents (*monthly rate*). The student also correctly identified the *y*-intercept (*The y-intercept is 5*) and explained what the *y*-intercept represents (*fee to join*). [2 points]

Part B: The student provided the correct answer (*Justin saves $20 by joining gym at the discounted price*). While support is not required for Part B, the student likely calculated the regular price and the discounted price for the first month by substituting 1 for *x* in each equation, solving both equations for *y*, and subtracting the two values. [1 point]

Part C: The student provided an insufficient explanation as to why the point ( –3, –25) is not a possible solution in the given situation (*The point (-3, -25) is not a solution because is solution can not be negative*). The response does not recognize that negative numbers in this context are not realistic. [0.5 point]

**T2-3 Score 1**

Part A: The student correctly identified the *y*-intercept (*the y-intercept is 5*), but the explanation for what the *y*-intercept represents (*the charges*) is incorrect. The student also incorrectly identified the slope (*The slope is 10x*) and what the slope represents (*the dollars*). [0.5 point]

Part B: The student provided the correct answer (*20 Dollars*). While support is not required for Part B, the student likely calculated the regular price and the discounted price for the first month by substituting 1 for *x* in each equation, solving both equations for *y*, and subtracting the two values. [1 point]

Part C: The student provided an incorrect explanation as to why the point ( –3, –25) is not a possible solution in the given situation (*Cause he didn’t have 25 dollars*). The response does not recognize that negative numbers in this context are not realistic. [0 points]

**T2-4 Score 3**

Part A: The student correctly identified the slope (*slope 10*) and explained what the slope represents (*monthly rate*). The student also correctly identified the *y*-intercept (*y*-intercept *5*) and explained what the *y*-intercept represents (*fee*). [2 points]

Part B: The student provided the correct answer (*$20*). [1 point]

Part C: The student provided an incorrect explanation as to why the point ( –3, –25) is not a possible solution in the given situation (*The point shows that Justin does not save any money with the discount*). The response does not recognize that negative numbers in this context are not realistic. [0 points]

**T2-5 Score 4**

Part A: The student correctly identified the slope (*The slope is 10*) and explained what the slope represents (*monthly rate*). The student correctly identified the *y*-intercept (*5 is the y-intercept*) and explained what the *y*-intercept represents (*initial fee to join*). Note that, if the slope value or the *y*-intercept value is identified, a correct explanation regarding what that value represents in the given situation is given credit by association (*5 is the y-intercept… 5 is the initial fee to join*). [2 points]

Part B: The student provided the correct answer (*He saves $20 in the first month*). While support is not required for Part B, the student likely calculated the regular price and the discounted price for the first month by substituting 1 for *x* in each equation, solving both equations for *y*, and subtracting the two values. [1 point]

Part C: The student provided a correct and complete explanation as to why the point ( –3, –25) is not a possible solution in the given situation (*You cannot pay a negative amount of money*). The student correctly identified that negative numbers in this context are not realistic. [1 point]

**T2-6 Score 0**

Part A: The student incorrectly identified the slope (*slope → y in y = mx + b*) and what the slope represents (*slope is the discounted price of dollars (y)*). The student also incorrectly identified the *y*-intercept (*y-intercept → b in y = mx + b*) and what the *y­*-intercept represents (*y-intercept is the gym charges*). [0 points]

Part B: The student provided an incorrect answer (*15 dollars saved by joining the gym*). [0 points]

Part C: The student provided an incorrect explanation as to why the point ( –3, –25) is not a possible solution in the given situation (*because you need 2 sets of points… You also need a number to be in front of -3*). The response does not recognize that negative numbers in this context are not realistic. [0 points]

**T2-7 Score 2**

Part A: The student correctly identified the slope (*Slope = 10/1*) and explained what the slope represents (*monthly rate*). The student also correctly identified the *y*-intercept (*y = 5*). The student’s explanation of what the *y*-intercept represents (*y-intercept is the discount*) is insufficient and receives no credit. [1.5 points]

Part B: The student provided the correct answer (*$20*). While support is not required for Part B, the student likely calculated the regular price and the discounted price for the first month by substituting 1 for *x* in each equation, solving both equations for *y*, and subtracting the two values. [1 point]

Part C: The student provided an incorrect explanation as to why the point ( –3, –25) is not a possible solution in the given situation. The student attempted to show that the point (-3, -25) is not a solution to the system of equations. The response does not recognize that negative numbers in this context are not realistic. [0 points]

**T2-8 Score 1**

Part A: The student correctly identified the slope (*The slope is 10/1*) but provided an incorrect value for the y-intercept (*y-intercept is (0,0)*). The student did not explain what the slope and y-intercept represent in the given situation. [0.5 point]

Part B: The student provided an incorrect answer (*$15*). No support (work or explanation) is required, so it is unclear where an error was made. [0 points]

Part C: The student provided an incorrect explanation as to why the point ( –3, –25) is not a possible solution in the given situation (*Because the slope is not equal to it*). The response does not recognize that negative numbers in this context are not realistic. [0 points]

**T2-9 Score 1**

Part A: The student incorrectly identified the slope (*10x*) but correctly explained what the slope represents (*monthly fee*). The student correctly identified the *y*-intercept (*5*) and what the *y*-intercept represents (*the amount of money he had to pay to join*). Note: the term "fee" is accepted for the explanation of the slope because the meaning is clarified by the word "monthly." [1.5 points]

Part B: The student did not provide a correct answer (*Justin saves 5 dollars per month and 15 dollars in joining*). No credit is awarded for providing the individual savings for the fee to join and the monthly rate since the prompt asks for the total savings. [0 points]

Part C: The student provided an incorrect explanation as to why the point ( –3, –25) is not a possible solution in the given situation (*The negative coordinates don’t tell how much Justin will pay. The negatives he found do not fit in the equation. The ordered pairs that Justin picked do not go with the equation*). The response does not recognize that negative numbers in this context are not realistic [0 points]

**T2-10 Score 4**

Part A: The student correctly identified the slope (*Slope: 10*) and explained what the slope represents (*monthly rate*). The student correctly identified the *y*-intercept (*y-intercept: 5*) and explained what the *y*-intercept represents (*shows how much it costs to join the gym*). [2 points]

Part B: The student provided the correct answer (*Justin saves $20 the first month*). Although work is not necessary for credit, the work shown is correct. The student shows how each first month’s cost is calculated by starting with the equation for the discounted price (*y = 10x + 5*), substituting 1 for *x*, and evaluating the equation to determine *y* = 15. The student then took the regular price equation (*y = 15x + 20*), substituted 1 for *x*, and evaluated the equation to determine *y* = 35. By finding the difference between the two *y* values (*35 – 15*), the student determined that Justin saves $20. [1 point]

Part C: The student provided a correct and complete explanation as to why the point ( –3, –25) is not a possible solution in the given situation. The student correctly identified that negative numbers in this context are not realistic (*because there is no such thing as negative time*). [1 point]