**Algebra 1 Baskets of Tomatoes – Training Set 1 Annotations**

**T1-1 Score 4**

Part A: The student provided two correct equations for the system of equations (*3x + 5y = 36* and *x + y = 8*). The student also provided a correct solution process by using the elimination method to solve the system of equations. The student began with the second equation (*x + y = 8*) and multiplied each term by -3 [*-3(x = y) = 8(-3)*] so when the student added two equations together the variable *x* was eliminated. The student solved for *y* (*2y = 12, y = 6*) and then solved for *x* (*x + 6 = 8, x = 2*). Although not required, the student described what the solution represents (*The customer bought 2 small baskets and 6 large baskets for $36*). [3 points]

Part B: The student provided a correct and complete explanation as to why the system of equations (*x = 2.5*) demonstrates that the claim is incorrect (*I can stop solving the system now because x does not equal a whole number. You can only purchase whole numbers of baskets. x represents a number of baskets that are a decimal. Therefore, this is how the customer’s claim is wrong)*. [1 point]

**T1-2 Score 2**

Part A: The student provided two correct equations for the system of equations (*3x + 5y = 36* and *x + y = 8*). The student provided correct but incomplete support by showing only a “check” of the correct solution [*3 (2) + 5 (6) = 36, 2 + 6 = 8*] without showing how the values were determined. The student also provided the solution (*2, 6*); however, the solution was embedded in the work. [2 points]

Part B: The student provided a correct but incomplete explanation by writing a correct system of equations that describes the purchase (*3x + 5y = 45* and *x + y = 10*) with an incomplete explanation (*only one part of the equation will work).* In the work shown, the student attempts a solution (*5* for *x* and *y*), but realizes this value works for one of the equations and not both. [0.5 point]

**T1-3 Score 1**

Part A: The student only provided two correct equations for the system of equations (*x + y = 8* and *3x + 5y = 36*)and did not provide support or the solution to the system of equations. [1 point]

Part B: The student provided a correct, but incomplete explanation [*because the customer probably thought that since 45 is in between 30 and 50 (the lowest and highest possible costs for ten baskets) it would work but since 45 ends in 5 there is not possible way to get that cost*]. [0.5 point]

**T1-4 Score 0**

Part A: The student provided an incorrect equation (*x + y = 36*) without any support or a solution. [0 points]

Part B: The student provided an incorrect explanation (*x + y = 45 because nothing u say come out to fit properly*) which does not explain why the claim is incorrect. [0 points]

**T1-5 Score 2**

Part A: The student provided only one of two correct equations for the system of equations (*3(x) + 5(y) = 36*). The student also provided correct but incomplete support by showing only a “check” of the correct solution (*3 · 2 + 5 · 6 = 36, 6 + 30 = 36*) without showing how the values were determined. The student provided the correct solution (*x = 2, y = 6*). [2 points]

Part B: The student a correct but incomplete explanation which included one of the two correct equations for the system of equations that describes the purchase (*3(x) + 5(y) = 45*, *Nothing can be multiplied by 3, and multiplied by 5, and also added together to get 45*) which does not explain the reason why there is not a way to arrive at the total of 45. [0 points]

**T1-6 Score 1**

Part A: The student provided incorrect run-on equations *($3.00 + $5.00y = $36.00 = 8 baskets total*). The student also provided correct but incomplete support by showing only a “check” of the correct solution (*3 × 2 = 6 + 5 × 6 = 30*, *6 + 30 = 36*) without showing how the values were determined. The student provided the correct solution (*x = 2 small baskets, and y = 6 large baskets*). [1.5 points]

Part B: The student provided an incorrect explanation (*This answer is impossible to find due to the fact that baskets cannot be divided into decimals*) and does not explain why the claim is incorrect. [0 points]

**T1-7 Score 3**

Part A: The student provided two correct equations for the system of equations (*3x + 5y = 36* and *8 = x + y*). The student also provided correct but incomplete support by explaining only a “check” of the correct solution (*I got this by substituting trying different x and y numbers that added up to the 8 baskets that he bought, and then trying the solutions in both equations, and (2,6) worked in both equations*). The student provided the correct solution using an ordered pair: (*2, 6*). [2.5 points]

Part B: The student provided a correct and complete explanation as to why the system of equations (*3x + 5y = 45* and *10 = x + y*) demonstrates that the claim is incorrect (*The customers claim is incorrect because if you substitute x (number if small baskets) and y (number of large baskets) into the equation, no two whole numbers fit that add up to 10 baskets and equal $45 in all*). [1 point]

**T1-8 Score 2**

Part A: The student provided only one of two correct equations for the system of equations (*36 = 3x + 5y*). The student also provided correct but incomplete support by showing a “check” of the correct solution (*36 = 3(2) + 5(6), 3 x 2 = 6, 5 x 6 = 30*). The student provided the correct solution (*x = 2, y = 6*). [2 points]

Part B: The student provided an incorrect explanation (*45 = 3x + 5y; No combination of baskets can be made to end up having to pay $45*) which does not explain why the claim is incorrect. [0 points]

**T1-9 Score 4**

Part A: The student provided two correct equations for the system of equations (*3x + 5y = 36* and *x + y = 8*). The student also provided a correct solution process by solving the equation *x + y = 8* for *y* (*y = 8 – x*), substituting (*8 – x*) for *y* in the first equation [*3x + 5(8 – x) = 36*], and solving the equation for *x* (*x = 2*). The student substituted the value of 2 for *x* in the equation *x + y = 8* (*2 + y = 8*) and solved for *y* (*y = 6*). Although not required, the student described what the solution represents (*The customer bought 2 small baskets and 6 large baskets*). [3 points]

Part B: The student provided a correct and complete explanation as to why the system of equations (*x = 2.5* and *y = 7.5*) demonstrates that the claim is incorrect (*You can only buy full baskets, so he wouldn’t be able to buy 10 baskets paying only $45, 3x + 5y = 45, x + y = 10*). [1 point]

**T1-10 Score 2**

Part A: The student provided only one of two correct equations for the system of equations (*3x + 5y = 36*). The student also provided correct but incomplete support by explaining only a “check” of the correct solution (*You have 8 baskets, so you plug in number combinations that equal 8 baskets, but also equal 36 dollars. If you plug in the numbers 2 for x and 6 for y you get 6 + 30 which equals 36*). The student provided the correct solution (*2 for x, 6 for y*). [2 points]

Part B: The student provided an incorrect explanation (*Because you can not have a combination of numbers that equal 45 dollars*) which does not explain why the claim is incorrect. [0 points]