**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 took the second equation (*x + y = 8*) and multiplied each term by -3 [*-3(x = y) = 8(-3)*] so that when the two equations are added together the variable *x* is eliminated and the student solved for *y* (*2y = 12, y = 6*). The student then solves 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 it 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 it only 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 inbetween 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 get to 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 showing *x + y = 8* solved for *y* (*y = 8 – x*), substituting that expression for *y* into the first equation [*3x + 5(8 – x) = 36*], solving for *x* (*x = 2*), substituting the value of *x* into the equation *x + y = 8* (*2 + y = 8*), and then solving 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]