## System Wordy Problems #1 (buying, weighing and paying for stuff $(\omega)$ )



## These word problems will likely be easier to solve by **ELIMINATION**

1) At Billy-Bobs Beef Eatin' BBQ Beef Bonanza, 12 hamburgers and 5 steaks cost \$131.14. But, 15 hamburgers and 2 steaks would cost you \$122.53. What is the cost for a single steak and a single burger?

## Make equations

12 hamburgers and 5 steaks cost \$131.14. 12H + 5C = 131.14**x2** 15 hamburgers and 2 steaks would cost you \$122.53. 15H + 2C = 122.53 x5

H = hamburger C = steak(Cow)

24H + 10C = 262.28

75H + 10C = 612.65

-51H = -305.37

H = \$6.87 5C = 131.14 - 12(6.87) C = \$9.74

So, a single steak and burger costs \$16.61 in total

To make money for an upcoming tournament, a team sold tickets for a draw for a Justin Bieber Dart 2) Board and tickets for a new calculator. Albert sold 9600 dart board tickets and 1200 tickets for the calculator draw and collected \$10020. Maria sold 1600 dart board tickets and 500 calculator tickets and collected \$2135. How much was each type of ticket?

Albert 9600D + 1200C = 10020

1600D + 500C = 2135Maria х6

D= dart board C = calculator

9600D + 1200C = 10020

- 9600D + 3000C = 12810

-1800C = -2790

C = \$1.559600D = 10020 - 1200(1.55)D = \$0.85

3) A music club charges an initial sign-up fee and then fee for every song purchased. Emily became a member and bought 36 songs paying \$67. Claire also become a member and bought 17 songs paying \$43.44. How much would it cost Hannah to join and buy 82 songs?

**Emily** F + 36T = 67

Claire F + 17T = 43.44can just subtract here to eliminate F (initial fee)

> F = 67 - 36(1.24) F = \$22.3619T = 23.56*T* = \$1.24 per tune

> > So Hannah will pay 22.36 + 82(1.24) or \$124.04

A box filled with 90 oranges has a weight of 15kg. When 14 oranges are removed, the weight 4) becomes 13.08 kg. How much does the box weigh?

90N + B = 15

76N + B = 13.08can just subtract here to eliminate B (box) and solve for N (navel orange weight)

14N = 1.92 $N = 0.137 \, ka$ so B = 15 - 90(.137)B = 2.67 kg

## Systems (wordy probs #1)

1) chicke	At Lisa's sandwich shoppe, two chicken sandwiches and four cheese sandwiches cost \$18. Five n sandwiches and six cheese sandwiches cost \$34. How much is each type of sandwich?
2) \$9. Ho	Ed bought 6 cheap golf balls and 4 expensive balls for \$12.50. Bob buys 4 cheap and 3 expensive for ow much would it cost if I bought one of each?
	A school was selling tickets for a play. Mallory sold 6 adult tickets and 15 student tickets and red \$48. Emily sold 8 adult and 7 student tickets and collected \$38. are the prices of the tickets?
4) pay fo	4 chocolate bars and 3 ice-cream cones cost \$5.30. 2 bars and 1 cone cost \$2.20. How much would I r 9 bars and 24 ice cream cones?
5) box th	20 weights are placed in a box and the total mass is 340 kg. When 48 more weights are added to the e mass becomes 760 kg. Find the mass of the box and weights.

-	3 footballs and 1 soccer ball cost \$155. 2 footballs and 3 soccer balls cost \$220. e cost of each type of ball.
\$511.6	The cost of renting a car depends on the number of days it is rented for and the kms driven. Ken paid 0 for 2 days and 860km. Lou paid \$648.8 for 5 days and 780 km. e cost per day and the km fee.
	While at the zoo, Spencer said "There are 45 types of animals and some have 2 feet and some have sey responded with "I counted 142 feet in total" How many of 4 foot and 2 foot animals are at this
-	A tennis club charges and annual fee and an hourly rate. One year, Toni played 39 hours and paid Sandra played 51 hours and paid \$456. Find the annual rate and hourly fee.
	Now solve the systems on page 410 #12 and Page 437 #10