Solving Problems With Two Variables

① Key:
w: width of rectangle
l: length of rectangle

$$\begin{cases} 2l + 2w = 18 \\ l = w + 5 \end{cases}$$

② Key:
P: # of plain marbles
C: # of colored marbles

$$\begin{cases} P + C = 180 \\ P = C + 32 \end{cases}$$

③ Key:
f: # of floor seats
b: # of balcony seats

$$\begin{cases} f + b = 900 \\ 12f + 10b = 9780 \end{cases}$$

④ Key:
r: # of hours Ryan spent building
K: # of hours Karl spent building

$$\begin{cases} r + K = 28 \\ r = K + 4 \end{cases}$$

⑤ Key:
x: first number
y: second number

$$\begin{cases} 7x - 3y = 25 \\ 2x + 5y = 95 \end{cases}$$

⑥ Key:
x: first number
y: second number

$$\begin{cases} x + y = 36 \\ x - y = 6 \end{cases}$$

⑦ Key:
x: # of boy members
y: # of girl members

$$\begin{cases} x + y = 41 \\ g + 3 = b \end{cases}$$

⑧ Key:
x: first number
y: second number

$$\begin{cases} x + y = 15 \\ 2x = 3y \end{cases}$$

What Do You Call A Cow That Never Gives Milk?

① Key: x: larger number
y: smaller number

$$\begin{cases} 4x = 7y \\ x + y = 22 \end{cases}$$

② Key: x: larger #
y: smaller #

$$\begin{cases} x - y = 15 \\ 5y = 2x - 9 \end{cases}$$

③ Key: x: larger #
y: smaller #

$$\begin{cases} x = y + 8 \\ x + y = 3x - 10 \end{cases}$$

④ Key: l: # of calories in Lemon Creme
f: # of calories in fudge cookie

$$\begin{cases} 3l + 2f = 400 \\ 2l + 3f = 425 \end{cases}$$

⑤ Key: x: price of a sweater
y: price of a shirt

$$\begin{cases} x + 5 = 2y \\ 4y + 3x = 275 \end{cases}$$

⑥ Key: x: # of pentagons
y: # of octagons

$$\begin{cases} 5x + 8y = 354 \\ x + y = 60 \end{cases}$$

⑦ Key: b: price of a burrito
t: price of a taco

$$\begin{cases} 2b + 5t = 19.50 \\ 5b + 2t = 22.50 \end{cases}$$

⑧ Key: x: # of 25 lb monitors
y: # of 40 lb monitors

$$\begin{cases} x + y = 20 \\ 25x + 40y = 680 \end{cases}$$

⑨ Key: x: weight of Tweedle DUM
y: weight of Tweedle DEE

$$\begin{cases} 2x + y = 361 \\ x + 2y = 362 \end{cases}$$