

\$20 to rent a lane per hour
\$5 per person to rent shoes/ball
\$100 amount of money for party
How many friends can you invite?

$F = \# \text{ of friends}$

$$100 = 20 + 5F \rightarrow 100 = 20 + 5F$$

$$\begin{array}{r} 80 = 5F \\ \underline{5 \quad 5} \\ 16 = F \end{array}$$

What if we want to rent a lane for more than 1 hour?

$T = \text{time} (\# \text{ of hours})$

$$100 = 20T + 5F$$

Karen:

\$15 to rent a lane per hour
\$10 per person to rent shoes/ball
\$150 amount of money for party

$$150 = 15T + 10F$$

substitution

elimination

$$\begin{array}{l} -2(100 = 20T + 5F) \rightarrow -200 = -40T - 10F \\ 150 = 15T + 10F \rightarrow +150 = 15T + 10F \\ \hline -50 = -25T \\ \underline{-25 \quad -25} \\ 2 = T \end{array}$$

ex

Verizon: \$45 base rate
\$10 per GB data

AT&T: \$30 base rate
\$15 per GB data

$D = \# \text{ of GB data}$ $C = \text{cost of plan}$

$$C = 45 + 10D$$

$$C = 30 + 15D$$

$$\begin{array}{l} C = 30 + 15D \\ 2D + 3C = 10 \end{array}$$

Notice both equations are already solved for C (substitution)

$$\begin{array}{l} \rightarrow C = 45 + 10D \\ \rightarrow C = 30 + 15D \\ \hline 45 + 10D = 30 + 15D \\ \underline{-10D \quad -10D} \\ 45 = 30 + 5D \\ \underline{-30 \quad -30} \\ 15 = 5D \\ \underline{5 \quad 5} \\ 3 = D \end{array}$$

$$\begin{array}{l} C = 45 + 10(3) \\ C = 45 + 30 \\ \hline C = 75 \end{array}$$