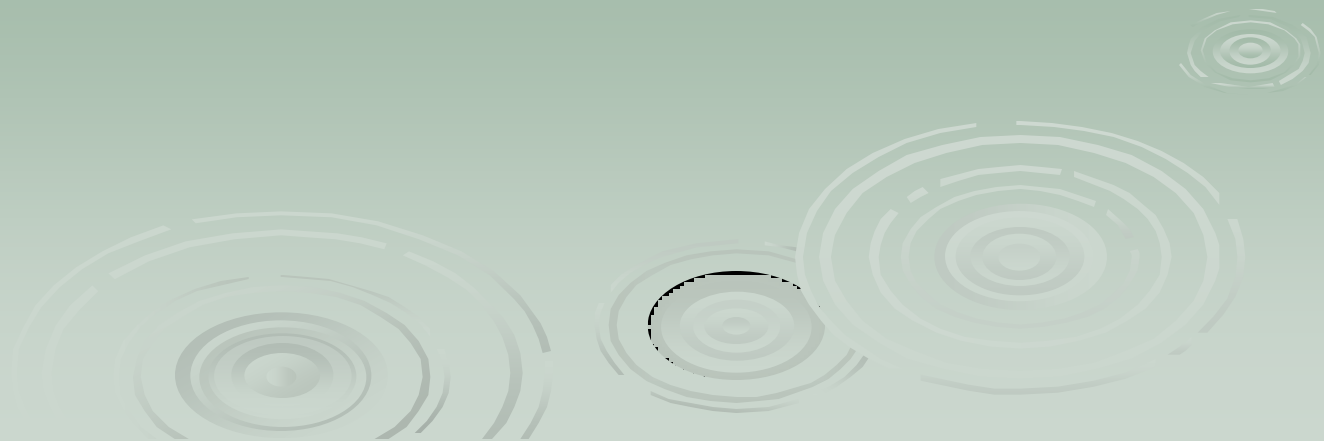


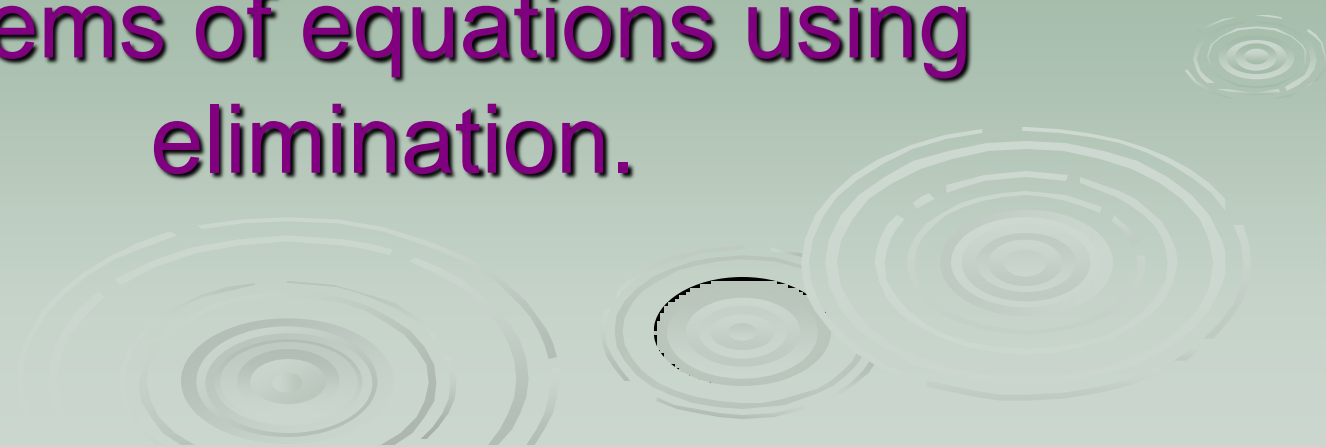
Starter Challenge

Take a TCAP Spiral from the front stool and work on Monday's 3 questions.



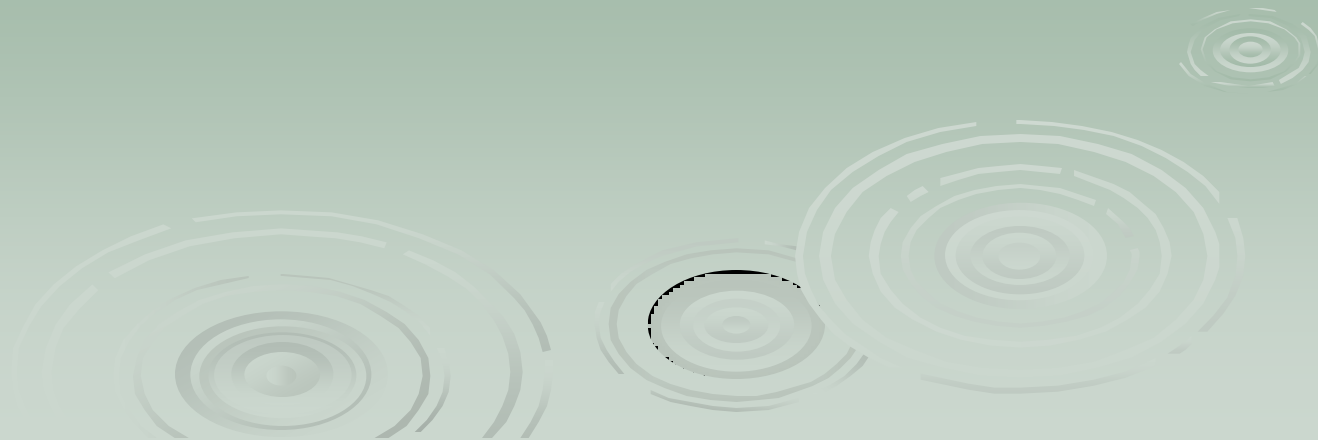
Systems of Equations Using Elimination

I CAN and I WILL solve systems of equations using elimination.

The background features several decorative water ripples in shades of light blue and white, scattered across the lower half of the slide.

Combination/Elimination

When both linear equations of a system are in the standard form $Ax+By=C$, you can solve the system using elimination. You combine⁺ the equations to eliminate one of the variables.



Solve the system:

$$\begin{array}{r} 2x+5y=17 \\ + \quad 6x-5y=-9 \\ \hline \end{array}$$

$$\frac{8x}{8} = \frac{8}{8}$$

$$x = 1$$

$$(1, 3)$$

$$\begin{array}{r} 2(1)+5y=17 \\ \cancel{2} + 5y = \cancel{17} \\ \hline \end{array}$$

$$\frac{5y}{5} = \frac{15}{5}$$

$$y = 3$$

Ex. 1)

$$\begin{array}{r} \hat{=} 2x + y = 6 \\ + \hat{=} 3x - y = 4 \\ \hline \end{array}$$

$$\frac{5x}{5} = \frac{10}{5}$$

$$x = 2$$

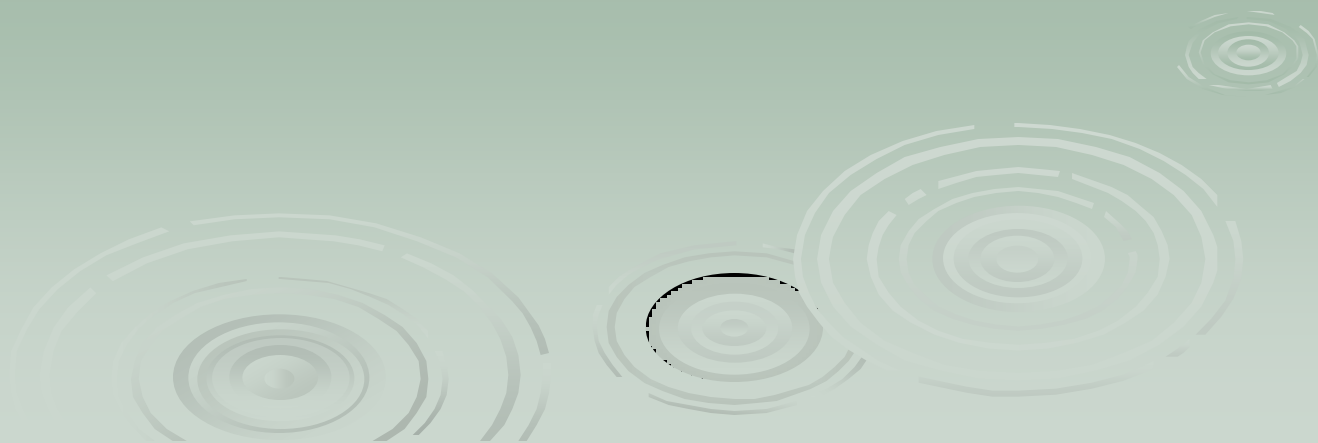
$$\begin{array}{r} 2(2) + y = 6 \\ - 4 + y = 6 \\ \hline y = 2 \end{array}$$

$$(2, 2)$$

On Your Own!

$$\hat{i}x + 3y = 5$$

$$\hat{i} - x + y = 3$$



Solve the system: $(2x-3y=61)$ -1
 $2x+y=-7$

$$\begin{array}{r} -2x+3y = -61 \\ + 2x+y = -7 \\ \hline 4y = -68 \\ \frac{4y}{4} = \frac{-68}{4} \end{array}$$

$$y = -17$$

$$\begin{array}{r} 2x + (-17) = -7 \\ +17 \\ \hline 2x = 10 \\ \frac{2x}{2} = \frac{10}{2} \end{array}$$

$$x = 5$$

$$(5, -17)$$

Ex. 2) $3x + y = 20$
 $(x + y = 12) \cdot -1$

$$\begin{array}{r} 3x + y = 20 \\ + \quad -x - y = -12 \\ \hline \end{array}$$

$$\frac{dx}{2} = \frac{8}{2}$$

$$x = 4$$

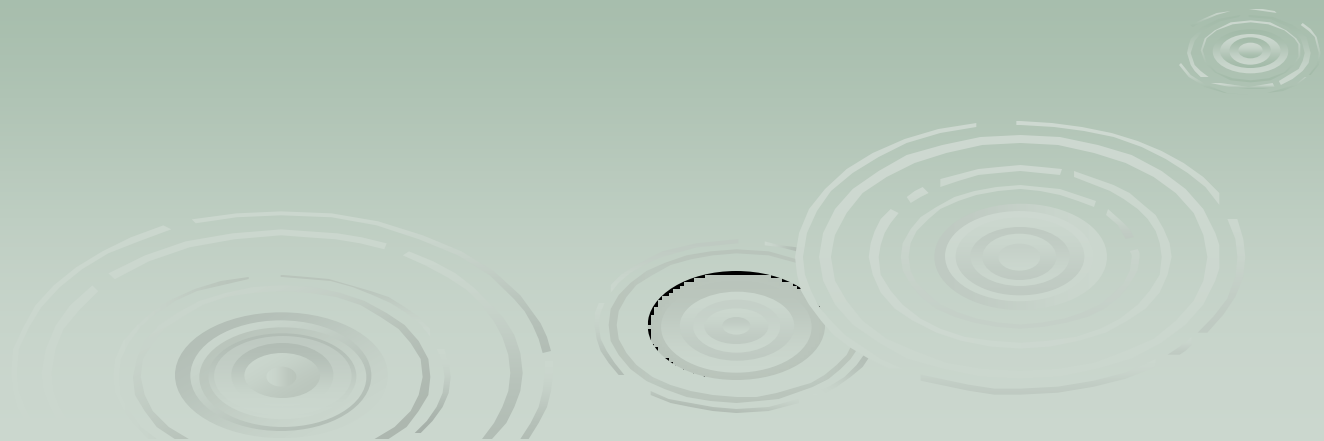
$$\begin{array}{r} 4 + y = 12 \\ -4 \quad -4 \\ \hline y = 8 \end{array}$$

$$(4, 8)$$

On Your Own:

$$x + 2y = 7$$

$$-3x + 2y = 3$$



Practice!

$$1. \begin{cases} -x + y = 5 \\ x - 5y = -9 \end{cases}$$

$$2. \begin{cases} x + y = 12 \\ x - y = 2 \end{cases}$$

$$3. \begin{cases} 2x + 5y = -24 \\ 3x - 5y = 14 \end{cases}$$

$$4. \begin{cases} x - 10y = 60 \\ x + 14y = 12 \end{cases}$$

$$5. \begin{cases} 5x + y = 0 \\ 5x + 2y = 30 \end{cases}$$

$$6. \begin{cases} -5x + 7y = 11 \\ -5x + 3y = 19 \end{cases}$$

Exit Ticket!

Pretend you have to explain to an absent student what we did today. Write down the steps you would tell them to take to solve a systems problem using elimination.

