EDTC 635 – Tools Vis

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Algebra I

Systems of Equations

Target Audience

Mini Unit Time Length: 8 days

Goals & Objectives

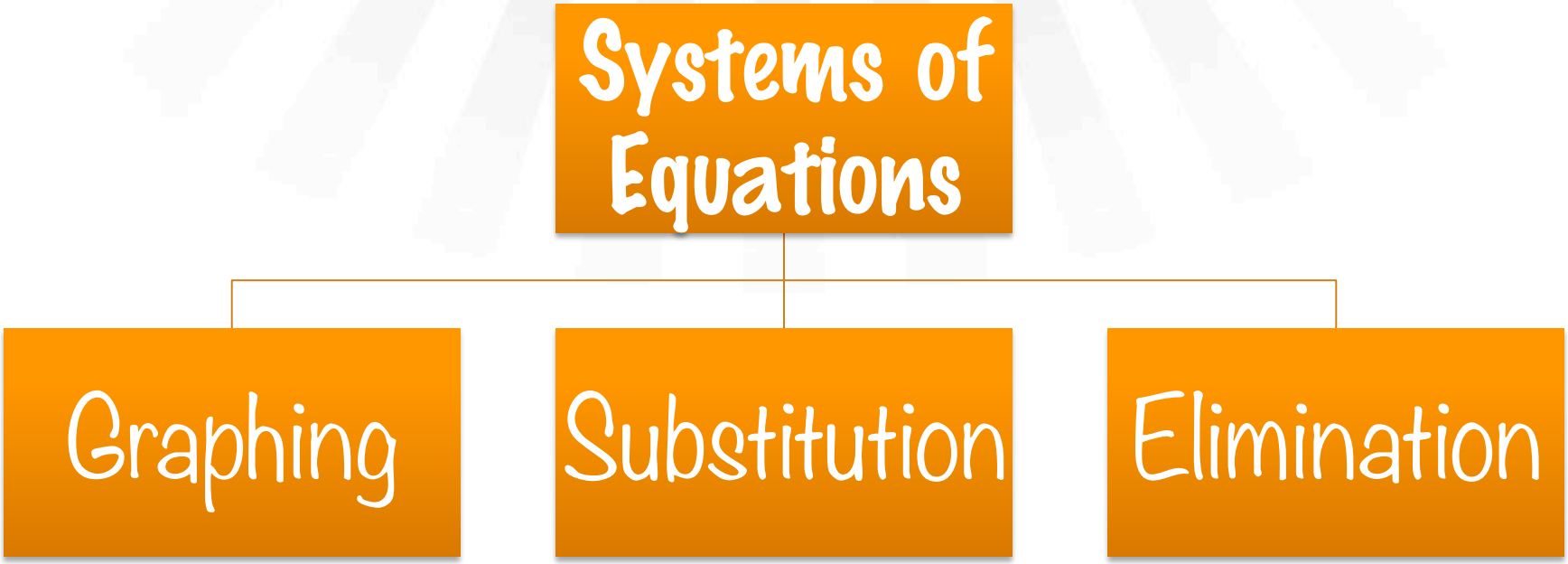
Students will be able to:

- Watch videos and take notes
- Solve systems of equations using graphing, elimination and substitution.

NJCC Standards

- A.REI.6 – Solve systems of equations of linear equations exactly and approximately (ex with graphs), focusing on pairs of linear equation in two variables.

Concept Map



Days ONE – TWO (Graphing)

- Watch video on graphing for homework and take notes.
- Practice Problems
- Watch Graphing Calculator demonstration video
- Complete Scavenger Hunt

GRAPHING CALCULATOR LESSON

Scavenger Hunt Practice

Name: _____ Algebra 1

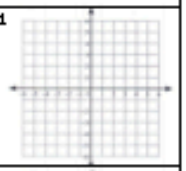
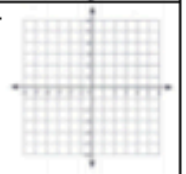
Solving Systems of Equations by GRAPHING Scavenger Hunt

Directions: Walk around the room and complete each problem. Remember to show your work in the space below. Your answer should match up with a corresponding letter that will reveal the answer to the riddle by the end of the activity.

What Do Gorillas Sleep On In Fruit Orchards?

__ __ __ __ __ __ __ __

#3 #8 #5 #2 #7 #6 #1 #4

1. "use graphing calculator"	5. "use graphing calculator"
2. "show work to get into slope-intercept form"	6. "use graphing calculator"
3. "use graphing calculator"	7. do work by hand 
4. "show work to get into slope-intercept form"	8. do work by hand 

(#1)

$y = -2x + 2$

$y = \frac{1}{3}x - 5$

A	B	T
(1, 5)	(-4, 3)	(3, -4)

(#2)

$y = 3$

$-3x + 2y = 6$

I	G	E
(0, 3)	(3, 0)	(3, -3)

Days THREE – FOUR (Substitution)

- Watch video for homework and take notes.

- Practice worksheet – Partner Pairup

Section 6.2

Obj. Solve systems of equations using substitution.

Examples:

1. Solve. $y = 3x$
   $x + y = -32$

Partner Practice

Name _____ Period ____ Algebra I

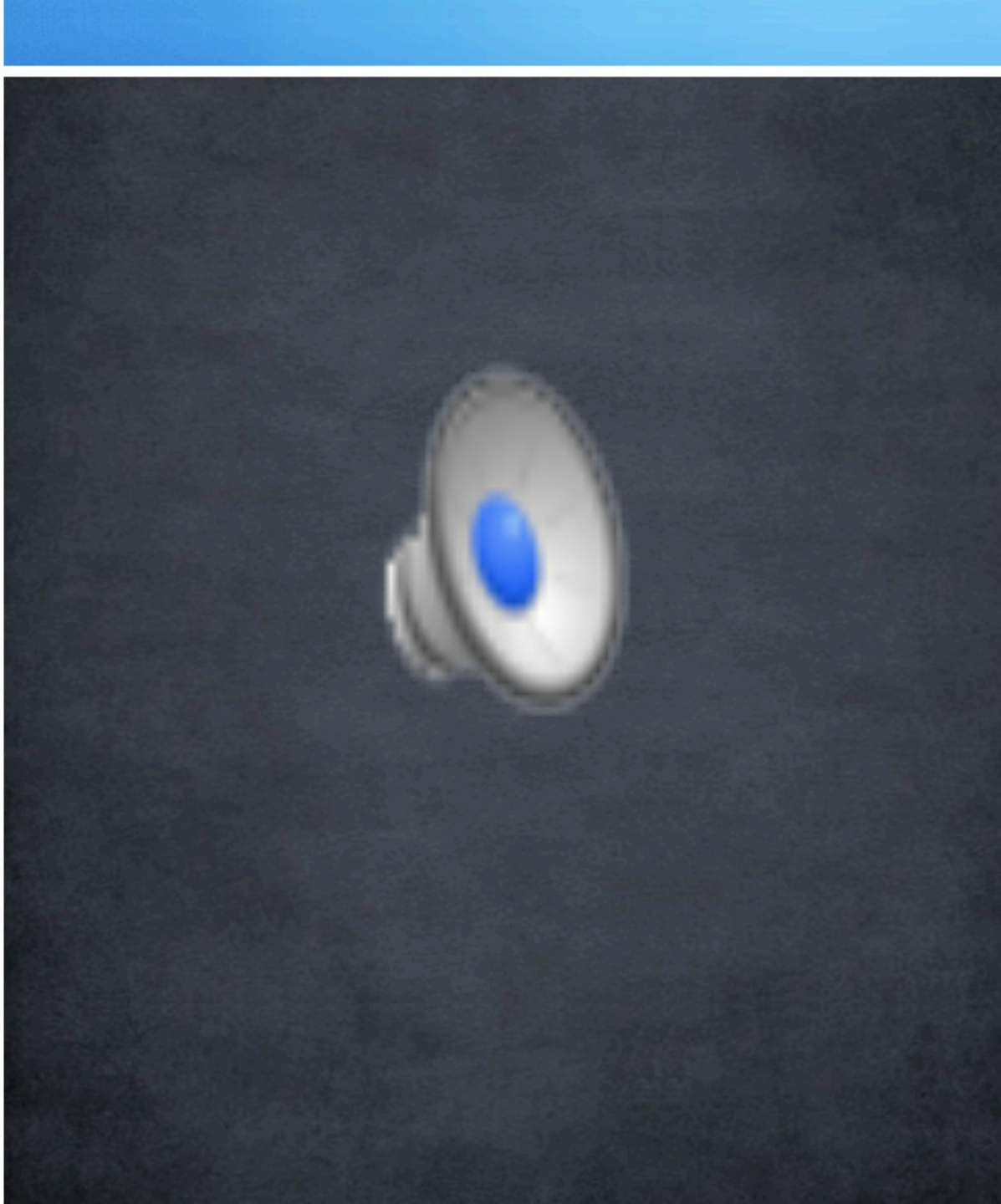
Substitution Match Up

Solve each system of equations by substitution. Partner #1 should do the problems on the left and Partner #2 should do the problems on the right. Check your answers with each other so that one problem from the column on the left matches up with a problem from the right.

Partner #1: _____	Partner #2: _____
1. $7x + 4y = 24$ $4x = 16$ (4, –1)	Red. $-x - 5y = 21$ $-6x = -24$ (4, –5)
2. $y = 5x - 25$ $y = -8x + 27$ (4, –5)	Orange $y = 8 - x$ $4x - 3y = -3$ (3, 5)
3. $2x + 3y = -11$ $4x + y = -7$ (–1, –3)	Yellow $y = x - 5$ $y = -2x + 7$ (4, –1)
4. $2x + y = 8$ $y = 14x - 40$ (3,2)	Green $-3x + 2y = -3$ $4x = -1 + y$ (–1, –3)
5. $-6x = -18$ $-8x + 3y = -9$ (3, 5)	Blue $y = 4x - 10$ $y = \frac{1}{3}x + 1$ (3, 2)

Days FIVE – SIX (Elimination)

- Watch video for homework and take notes.
- Practice worksheet



Practice Problems

Name: _____ Algebra I

Section 6.3 – Solving Systems of Equations by ELIMINATION

1. $-4x - 2y = -12$ $4x + 8y = -24$	2. $4x + 8y = 20$ $-4x + 2y = -30$
3. $x - y = 11$ $2x + y = 19$	4. $-6x + 5y = 1$ $6x + 4y = -10$
5. $-2x - 9y = -25$ $-4x - 9y = -23$	6. $8x + y = -16$ $-3x + y = -5$
7. $-6x + 6y = 6$ $-6x + 3y = -12$	8. $7x + 2y = 24$ $8x + 2y = 30$
9. $5x + y = 9$ $10x - 7y = -18$	10. $-4x + 9y = 9$ $x - 3y = -6$
11. $-3x + 7y = -16$ $-9x + 5y = 16$	12. $-7x + y = -19$ $-2x + 3y = -19$

Resources

- Charles, R.I. (2012). *Algebra 1: Common Core. Boston, MA: Pearson*