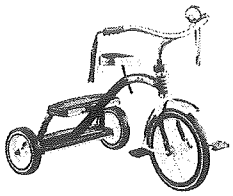
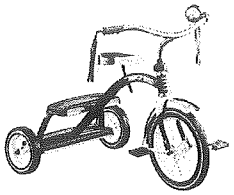
Algebra 1: Unit 8, lesson 1 Notes: Solving Systems of Equations by Graphing Name:



Trike Wars



Table

Who is your predicted winner: _____

Use the rate known to calculate how far the rider is after at a given time

Punky Brewster				
Time (in seconds)				
Feet				

Bald Biker				
Time (in seconds)				
Feet				

Howard				
Time (in seconds)				
Feet				

Graph

Create and label axes; include units.

Rule

Write a rule to represent each rider. What does the slope and y-intercept represent:

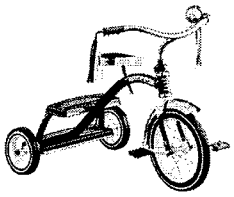
Punky Brewster:

Bald Biker:

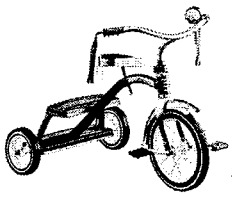
Howard:

Situation

List the information you know about the race and riders



Trike Wars



Who Wins the Race:	When are they even:
At what distance would the given rider be the winner (he/she is in the lead).	**At what distance would the given rider be at the same point as another rider.**
Punky Brewster:	Punky Brewster and Bald Biker:
Bald Biker:	Punky Brewster and Howard:
Howard:	Bald Biker and Howard:

System of linear equations:

Solution of a system of linear equations:

Since all ____ lines didn't meet there is ____ a solution to this system of 3 equations with 2 variables.

But ____ lines did meet so there ____ a solution to this system when just looking at 2 equations with 2 variables.

What are the solutions?

Punky Brewster and Bald Biker	Punky Brewster and Howard	Bald Biker and Howard

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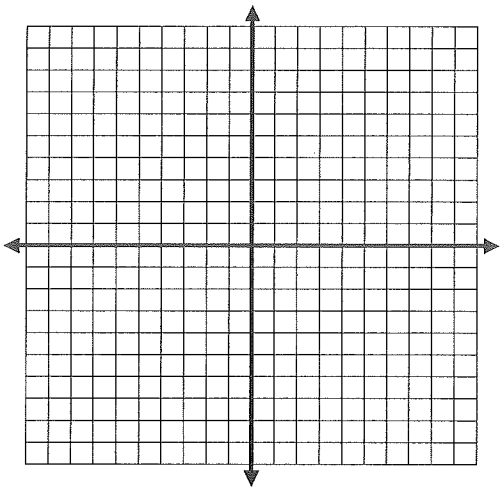
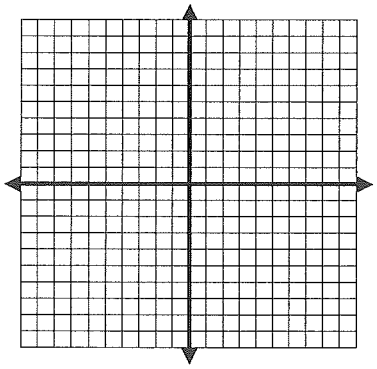
These 3 systems above are examples of a _____ system and an _____ system.

Consistent system:

Independent system:

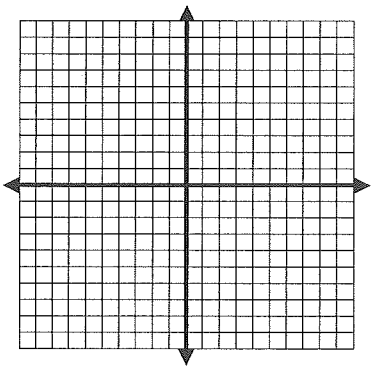


In Trike Wars we had lines that _____ and therefore we had _____ solution for each pair of 2 lines. What else could have happened...?



_____

_____



_____

_____

If there are Consistent systems then there must also be _____ _____:

And if there are Independent systems then there must also be _____ _____:

Graphs of Equations	Number of Solutions	Type of System

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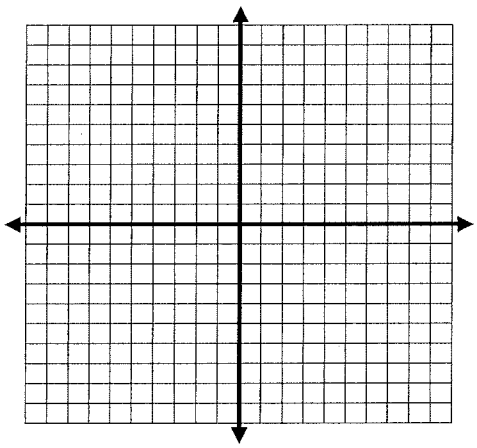
Solve the system of linear equations by graphing. Check your answer and state the type of system.

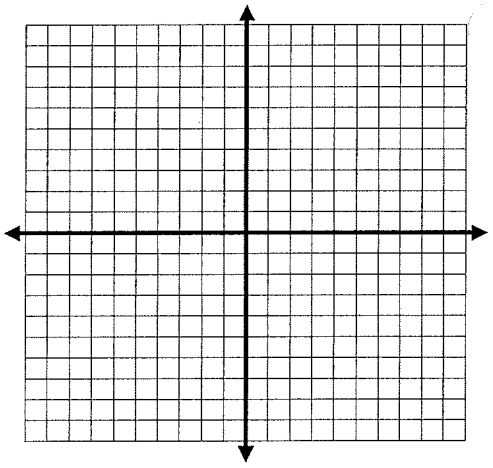
1) $\begin{cases} y = -3x + 4 \\ y = 3x - 2 \end{cases}$



Type:

Check:

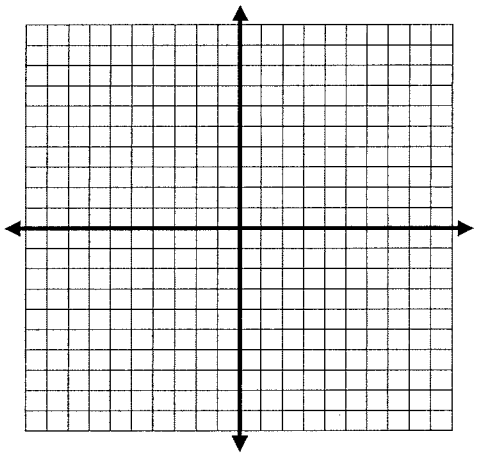
2) $\begin{cases} y = x + 2 \\ x = -3 \end{cases}$



Type:

Check:

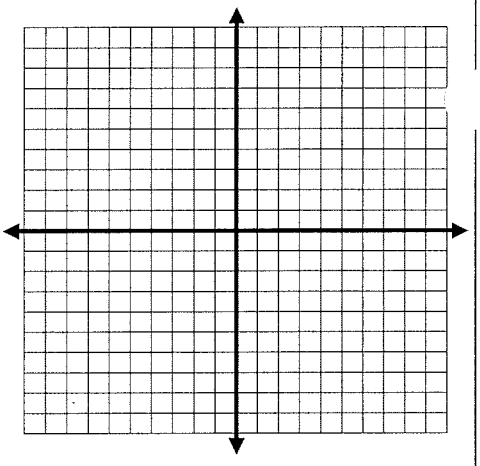
3) $\begin{cases} y = 2x - 3 \\ 4x - 2y = 6 \end{cases}$



Type:

Check:

4) $\begin{cases} 2y = x - 2 \\ 2x = 4y - 12 \end{cases}$



Type:

Check:

Ticket out the Door

In Trike Wars find a length the race would need to be for the Rider you picked to be the winner.