

(A) Lesson Objectives:

- a. Investigate the numbers of solutions that linear systems can have
- b. Use multiple representations in solving linear systems
- c. Solve word problems involving linear systems

(B) Investigation A – What are equivalent linear equations?

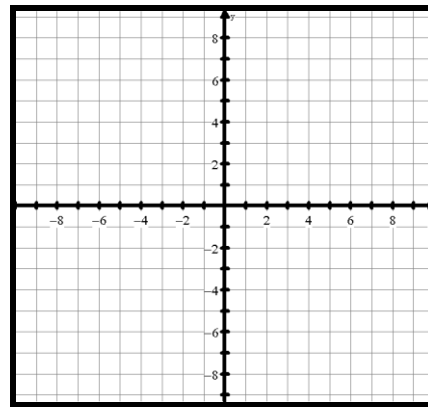
1. A) On the same grid, graph the lines $x + 2y = 4$ and $2x + 4y = 8$.

1. B) How are the graphs related?

1. C) How are the equations related?

Algebraic Verification

Graphic Verification



Numeric Verification

x	y in (L1)	Y in (L2)

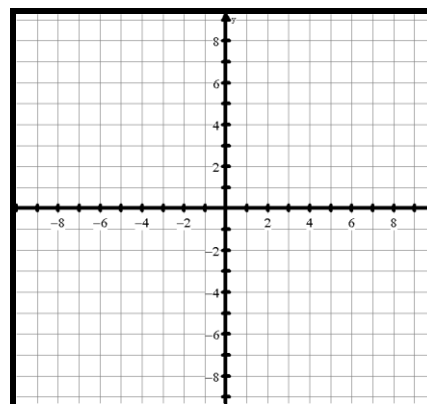
2. A) On the same grid, graph the lines $y = -\frac{1}{2}x + 3$ and $x + 2y = 6$.

2. B) How are the graphs related?

2. C) How are the equations related?

Algebraic Verification

Graphic Verification



Numeric Verification

x	y in (L1)	Y in (L2)

3. a) Without graphing, tell which two of the following are **equivalent linear systems**. Explain your reasoning.

(i) $y - x + 5 = 0$

(ii) $y = 3x + 15$

(iii) $2y = 2x - 10$

3. b) Check your answer by graphing the three lines

2. A) On the same grid, graph the lines $y = -\frac{1}{2}x + 3$ and $x + 2y = -12$.

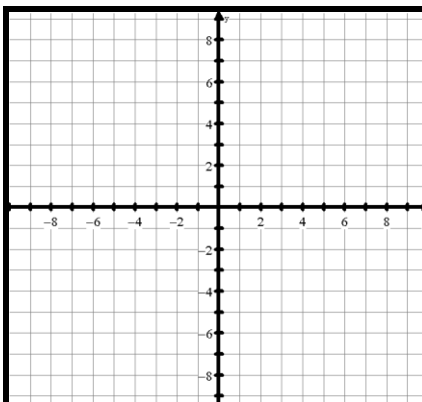
2. B) How are the graphs related?

2. C) How are the equations related?

Algebraic Verification

Graphic Verification

Numeric Verification



x	y in (L1)	Y in (L2)

1. A) On the same grid, graph the lines $x + 2y = 4$ and $2x + 4y = 16$.

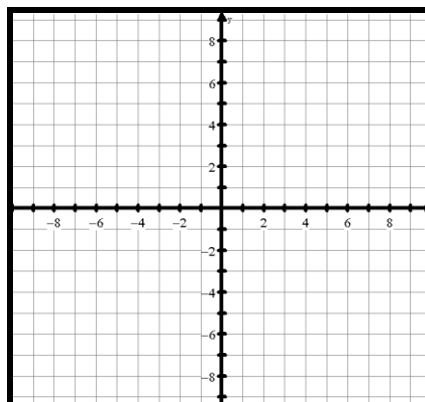
1. B) How are the graphs related?

1. C) How are the equations related?

Algebraic Verification

Graphic Verification

Numeric Verification



x	y in (L1)	Y in (L2)

(C) HOMEWORK → For Further Practice:

(a) DAY 1 - Nelson Chap 1.8, p92, Q13,14,16,17,18,22,25

(b) DAY 2 - Nelson chap 1.9, p102, Q5,14,15,16,17,18,23,24

(D) Extra Help →

a. WORKED EXAMPLES at

http://infinity.cos.edu/algebra/ProblemsSolved/Chapter%2004/Chapter%204_Word%20Problems.pdf

b. More worked and very well explained examples at

<http://www.algebra-class.com/solving-systems-of-equations.html>

c. Video Help #1 → <http://www.youtube.com/watch?v=il2Mf5706hk>

d. Video Help #2 → <http://www.youtube.com/watch?v=V-gmMeHiY5c&feature=relmfu>