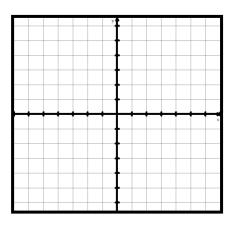
- (A) Lesson Objectives:
  - a. Write equations of linear equations for Real World Applications
  - b. Solve Real World Applications using Linear Systems
  - c. Use multiple representations in solving linear systems
- (B) Opening Exercise:
  - (i) Algebraically, determine the intersection point of the lines  $L_1$ : 3x + y = 9 and  $L_2$ : x 2y = -7. Verify graphically

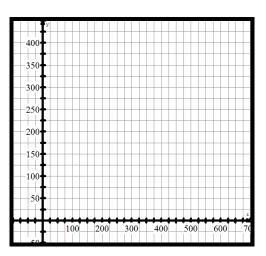


(C) In Class Exercises

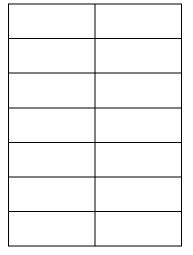
Ex 1. You are selling tickets for a musical at ISM. Student tickets cost \$5 and general admission tickets cost \$8. If you sell 500 tickets and collect \$3475, how many student tickets and how many general admission.

Algebraic Soln

**Graphic Verification** 

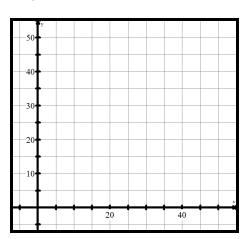


Numeric Verification

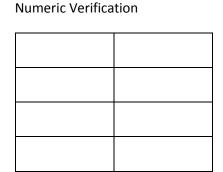


Ex 2. Next week your math teacher is giving a chapter test worth 100 points. The test will consist of 35 problems. Some problems are worth 2 points and some problems are worth 4 points. How many problems of each value are on the test?

**Graphic Soln** 



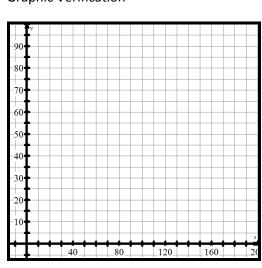
Algebraic Verification



Ex 3. You just purchased a cellular phone and are trying to decide the best cellular phone company in which to give your business. When you contacted the Talks-A-Lot company, they were offering a monthly plan of \$40 for 500 minutes and \$0.25 for each minute over the 500 minutes. In the Sunday paper you see an ad for the ChatAway company, which offers a monthly plan of \$35 for 500 minutes and \$0.30 for each minute over the 500 minutes. How many minutes would you have to talk over the 500 minutes for the cost to be the same with both companies? What would be the equal cost?

Numeric Soln

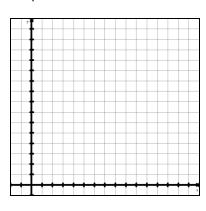
**Graphic Verification** 



Algebraic Verification

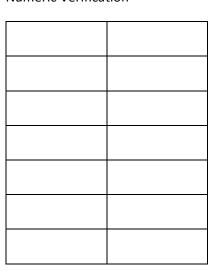
Ex 4. Mr. S. has \$18,000 savings in 2 accounts. My total interest earned for the year was \$930. One account earns me 6% annual interest and the other account earns me 3% annual interest. How much do I have in each account?

**Graphic Soln** 



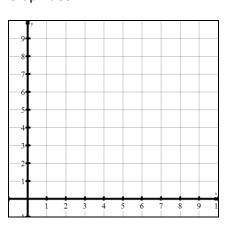
Algebraic Verification

**Numeric Verification** 



Ex 5. Mr. S travelled 1930 miles by car and plane. He drove to the airport at an average speed of 60 mph and the plane averaged 350 mph. The total trip took 8 hours. How long did it take to get to the airport?

**Graphic Soln** 



Algebraic Verification

**Numeric Verification** 

## Lesson Title: Applying Linear Systems Date:

- (D) 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
- (E) Extra Help →
  - a. WORKED EXAMPLES at <a href="http://infinity.cos.edu/algebra/ProblemsSolved/Chapter%2004/Chapter%204">http://infinity.cos.edu/algebra/ProblemsSolved/Chapter%2004/Chapter%204</a> Word%20Problems.pdf
  - b. More worked and very well explained examples at <a href="http://www.algebra-class.com/solving-systems-of-equations.html">http://www.algebra-class.com/solving-systems-of-equations.html</a>
  - c. Video Help #1 → <a href="http://www.youtube.com/watch?v=il2Mf5706hk">http://www.youtube.com/watch?v=il2Mf5706hk</a>
  - d. Video Help #2 → <a href="http://www.youtube.com/watch?v=V-gmMeHiY5c&feature=reImfu">http://www.youtube.com/watch?v=V-gmMeHiY5c&feature=reImfu</a>