

9th Grade Assignment – Week #18

Group Assignment:

For Tuesday and Thursday:

- **Problem Set #5** from the *Word Problem* unit: problems #1-8. Especially, be sure to do problem #8.

Individual Work

- Do these problems:
 - **Problem Set #4** from the *Word Problem* unit: problems #7-17
 - Complete any problems listed above in the *Group Assignment* that you didn't complete during group work.
 - *Challenge!* Do this problem (using algebra):

Frodo's age is 8 years less than three times Sam's age. Three years from now, Frodo's age will be twice Sam's age. Find both of their ages now.

(Word Problems) **Problem Set #4**

Group Work

Find the numbers.

- 1) The sum of two numbers is 17 and the sum of their squares is 185.
- 2) The difference of two numbers is 16. Four times the smaller number is 13 less than three times the larger number. What are the numbers?
- 3) The sum of two consecutive integers is 31.
- 4) The sum of two odd consecutive integers is 48.
- 5) The sum of two even consecutive integers is 34.
- 6) Find the common solution:
 $y = 2x + 7$
 $3x + 4y = 6$

Homework

Section A

Find the numbers.

- 7) The sum of two numbers is 210 and their difference is 40.
- 8) Two consecutive integers are such that four times the smaller is four more than 3 times the larger.
- 9) The product of two numbers is 80 and one number is one more than three times the other.

Find the common solution to each pair of equations.

- 10) $y = x + 2$
 $y = 2x - 1$
- 11) $2x + y = 5$
 $x + y = 4$
- 12) $5x + 3y = 1$
 $x - 3y = 9$

Section B

Find the numbers.

- 13) The sum of two numbers is 335. The larger number is 40 less than twice the smaller.
- 14) Together a coffee and a donut cost \$3.35. The donut costs 40¢ less than twice the price of the coffee. Find the price of the donut.

Find the common solution to each pair of equations.

- 15) $y = 2x + 4$
 $3y - 5x = 9$
- 16) $x = 4y + 1$
 $3y + 2x = 7$
- 17) $5x - y = 3$
 $2y - x = 12$

Problem Set #5

Group Work

Find the common solution.

- $4x + y = 1$
 $2x + 2y = 5$
- $3x - 5y = 5$
 $2x + 3y = 16$
- Give two solutions to
 $3x - 7y = 21$

Find the test average.

Note: In this unit, we will use the following percent equivalents for grades:

A+ = 98%; A = 95%; A- = 92%,

B+ = 88%; B = 85%; B- = 82%,

Etc.

- The first test is 17 out of 20, the second test is 18 out of 25, and both tests have equal weight.
- The first test is 17 out of 20 and is worth 25%, and the second test is 18 out of 25 and is worth 75%.
- The first test is 17 out of 20 and is worth 35%, and the second test is 18 out of 25 and is worth 65%.
- The first test is a C and is worth 25%, the second test is a D and is worth 15%, and the third test is a B+ and is worth 60%.
- Bill's age is a year less than twice Jane's age. Five years ago, Bill's age was three times Jane's age. Find Bill's age.

Homework

Section A

- Twice a smaller number is 18 less than the larger, and their difference is 11. What are the two numbers?
- The difference of two numbers is five, and the sum of their squares is 233. Find the two numbers.
- Fran has two dollars less than twice as much money as Mary. How much does Mary have if they have \$41.50 together?
- Joe received a 95% on the final exam which was worth 60% of the class grade. If he received a 67% on the midterm exam, what was his final grade in the class if the midterm exam was worth 40% of the class grade?
- Find the common solution to each pair of equations:
 - $x + y = 1$
 $x - y = 6$
 - $4y - 3x = 12$
 $3x + 11y = -7$
 - $3x + 2y = 5$
 $3x + 5y = 32$
- Give two other equations that have all the same solutions as
 $2x - 3y = 7$

Section B

- The sum of the squares of two consecutive odd integers is 394.
- Emily received a C and a B on her two essays, which were each worth 20%, an A- for class participation (worth 15%), and a D on her final exam (worth 45%). What is her final course (letter) grade?
- Find the common solution to each pair of equations:
 - $y = 3x - 1$
 $4x - 3y = 13$
 - $x + 2y = 4$
 $3x - 4y = 17$
 - $5x - 2y = 20$
 $2x + 7y = -5$