Here are 18 questions for you to try. Write all your working out and answers by hand on your own notepaper and hand them to me next week. Please use lots of space and as many pages as you want, so I can include corrections or comments - otherwise I will ask you to redo it. It must be your own note paper, not a printout of this. You do not need to write the questions, but it is very important that you show clearly any work you had to do to get your answers. Each question is worth 2 points for a total of 36.

Section 2.1 Solving linear equations

(1) Simplify this algebraic expression: $6(x + 5) - 2(x - 3) + 4$

(Hint: first distribute. Your answer should have no parentheses and no like terms.)

(2) For the equation
$$3x - 8 = 5x$$
check by substituting if the following numbers are solutions: **(a)** $x = 2$, **(b)** $x = -4$

(3) For the equation
$$-3x + 1 = -1$$
check if the following numbers are solutions: **(a)** $x = \dfrac{1}{3}$, **(b)** $x = \dfrac{2}{3}$

(4) Solve this linear equation and check that your solution works: $6x - x = 20 - 5$

(5) Solve and check: $4(x - 5) = -15 - 5$

(6) Solve and check: $1 + 2(x + 3) = 4$

(7) Solve this equation and check your solution works: $3(w - 2) - (w + 6) = 4(w - 1)$

(Hint: show your steps – first simplify each side. Did you get a final answer $w = -4$?)

(8) Solve: $9(2m - 3) - 8 = 4m + 7$

Section 2.3 Solving formulas

(9) Solve this formula for y: $5x + y = 10$

(Hint: reorganize the equation to isolate y on the left.)

(10) Solve this formula for x: $5x + y = 10$

(11) Solve this formula for y: $2x - 3y = 13$

(12) Solve this formula for h: $A = \dfrac{1}{2}bh$

Section 2.5 Solving linear inequalities

(13) Graph this inequality on the number line and write in interval notation: $x > -3$

(14) Graph this inequality on the number line and write in interval notation: $x < 2$

(15) Graph this inequality and write in interval notation: $-1 \le x < 3$

(16) Solve this inequality and write the solution in interval notation: $10x < 3x + 7$

(17) Solve this inequality and write the solution in interval notation: $-2x \ge 8$

(18) Solve this inequality and write the solution in interval notation: $x - 4(x+1) > -(5-1)$
   (Hint: did you get $(-\infty, 0)$ for this last one?)

If you get stuck on a question or aren't sure if you understand it:

- Go over the relevant class notes and section in the textbook.

- Check if you get the right answer for a similar odd-numbered question in the text-book (answers at the back of the book).

- Ask me about it after class.

- Come to my office hours: Mon 12:00 - 1:00, Wed 12:00 - 1:00 in CP 317.

- Go to the Math Tutorial Lab in-person in CP 303 or online.