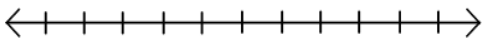
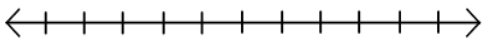
Homework Day 1

1. Solve each inequality and graph its solution.

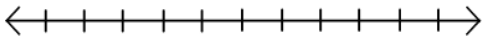
a) $-11 \geq 6 - 2n - 5$



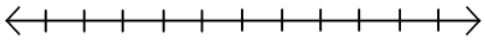
b) $x + 1 + 4 \leq 9$



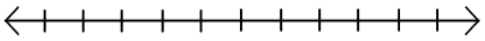
c) $5k - 2k > -9$



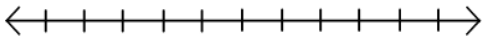
d) $30 - 6a < -3(5 + 7a)$



e) $2(6 + 4n) \geq 12 - 8n$

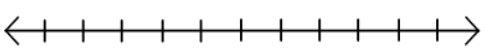


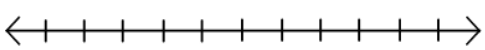
f) $-33 - n \leq -3(2n + 1)$



g) $-x + 23 < 2 - 2(x-8)$

h) $12(10b - 9) > -12(9 + 8b)$





2. A school's Spanish Club is selling bumper stickers. They bought 100 stickers for $55 and have to give the company 15 cents for every sticker that the club sells. If they plan to sell each bumper sticker for $1.25, how many do they have to sell to make a profit?

3. The chess club is selling caps to raise $425 for a trip. They have $175 already. If the club members sell caps for $12 each, at least how many caps do they need to sell to make enough money for their trip?

4. Josef is on the planning committee for the eighth-grade party. Thee food, decoration, and entertainment costs a total of $350. The committee has $75 already. If the committee sells the tickets for $5 each, at least how many tickets must be sold to cover the remaining cost of the party?

5. A speech is being given in a gymnasium that can hold no more than 650 people. A permanent bleacher will seat 136 people. The event organizers are setting up 25 rows with an equal number of chairs. At most, how many chairs can be in each row?

Homework Day 2

1. Solve each inequality.

a) $15b > 14b - 3.2$

b) $-3h + 22 \leq 4$

c) $4(2k - 1) > -10(k - 5)$

d) $3(x - 2) > 5(x - 7)$

e) $y - 23 < -8 + 4y$

f) $-13 \leq \frac{x}{11} - 9$

2. Joseph is saving for a new $1000 bike. He currently has $200. If he saves $20 per week, how long must he wait to save at least $1100 to cover tax?

3. Mrs. Johnson charges her music students $45 per lesson plus a recital fee of $40. How many lessons can the student take if he pays no more than $850?

4. Jose plans to spend at most $120 for shirts and pants. He bought 4 shirts for $24.50. How much can he spend on pants?

5. Pedro's grandmother is 50 years older than him. If she is also at least 5 more than 6 times the age of Pedro, how old is he?

6. You have $20.75 to spend on pizza. It costs $14.50 plus $1.25 for each additional topping, tax included. Solve an inequality to find the maximum number of toppings one pizza can have.

7. Jack wants to run at least 275 miles before the baseball season begins. He has already run 25 miles. He plans to run 2.5 miles each day. At this rate, what is the fewest number of days he will need to reach his goal?

Homework Day 3

1. Antonio has budgeted an average of $45 a month for entertainment. For the first five months of the year he has spent $48, $39, $60, $48, and $33. How much can he spend in the sixth month without exceeding his average budget?

2. Rachel is serving lemonade from a pitcher that holds 60 ounces. What are the possible numbers of 7-ounce juice glasses she can fill from one pitcher?

3. Jillian must average at least 90 on two quiz scores before she can move to the next skill level. Jillian got a 92 on her first quiz. What scores could Jillian get on her second quiz in order to move to the next skill level?

4. Glenda has a $40 gift certificate to a café that sells her favorite tuna sandwich for $3.75 after tax. What are the possible numbers of tuna sandwiches that she can buy with her gift certificate?

5. Solve for each variable.

a) Solve for m: $4m - 8n = 2$

b) Solve for w: $V = l \cdot w \cdot h$

c) Solve for p: $R = \frac{pV}{nT}$

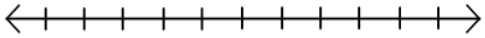
6. Rewrite the equation so that y is a function of x.

a) $\frac{1}{2}y + 8 = -4x$

b) $3x + 2y - 4 = 3(5 - y)$

c) $5x - 4x + 10 = 24 - 4y$

7. Solve and graph: $2y + \frac{3}{4} > 1$



Homework Day 4

1. The temperature formula $C = \frac{5}{9}(F - 32)$ is used to convert the temperature in degrees Fahrenheit to degrees Celsius. Use the temperature formula to answer each question.

   a) The boiling point of a substance is the temperature at which the state of the substance changes from liquid to gas. For water, the boiling point is when the water starts to boil and vaporizes as steam. The boiling point of water is 212F. What is the boiling point in degrees Celsius?

   b) Solve the temperature formula for F that can be used to convert the temperature in degrees Celsius in Fahrenheit.

   c) What is 10 °C in F?

2. Solve the inequality $\frac{x}{5} - \frac{x}{6} \geq \frac{1}{15}$.

3. Use this equation to estimate typing speed, $S = \frac{w}{5} - 2e$, where S is the accurate typing speed, w is the number of words typed in 5 minutes, and e is the number of errors.

   a) One of the qualifications for a job is typing speed of at least 65 words per minute. If Jordan knows that she will be able to type 350 words in five minutes, what is the maximum number of errors she can make?

   b) Tanner usually makes 3 errors every 5 minutes when he is typing. If his goal is an accurate typing speed of at least 55 words per minute, how many words does he have to be able to type in 5 minutes?

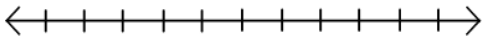
4. A taxi charges $2.05 per ride and $0.20 for each mile. How many miles can you travel in the cab and have the fare be less than $10?

5. Celia's long distance company charges $5.95 per month plus $0.06 per minute. If she has budgeted $30 for long distance, what is the maximum number of minutes she can call long distance per month?

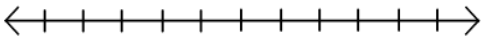
Homework Day 5

1. Solve each inequality and graph its solution.

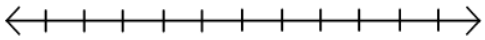
a) $0 > -5x - 6x$



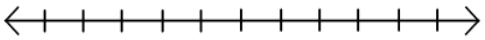
b) $-9 > -5n - 4n$



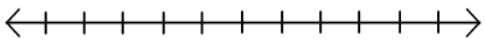
c) $-2 \geq 4p + 6 + 4$



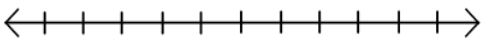
d) $33 + 4x \leq -(x + 7)$



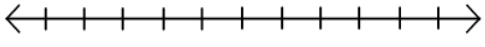
e) $-5(2b + 7) + b < -b - 11$



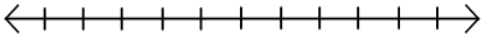
f) $-3(-7p - 6) - 7 < p - 29$



g) $32 - 5n \geq 7 - 5(n - 5)$



h) $-2(k - 12) - 5(k + 2) < -9k + 4k$



2. Solve each inequality.

a) $-2(x + 8) > -4$ b) $0.8y + 6 > 0.5y - 9$ c) $4(m-1) + 7 < 5(-m + 6)$

3. The school club is selling printed T-shirts to raise $650 for a trip. The table shows the profit they will make on each shirt after they pay the cost of production.

Shirt	Profit
50/50	$5.50
100% cotton	$7.82

a) Suppose the club already has $150, at least how many 50/50 shirts must they sell to make enough money for the trip?

b) Suppose the club already has $100, but it plans to spend $50 on advertising. At least how many 100% cotton shirts must they sell to make enough money for the trip?

c) Suppose the club sold thirty 50/50 shirts on the first day of sales. At least how many more 50/50 shirts must they sell to make enough money for the trip?