Assignment 5.6 – Solving Equations and Inequalities

Variable	Meaning	Period
M	Minutes of homework for Math: AGS 1	1
P	Minutes of homework for Physics	2
S	Minutes of homework for Social Studies 9	3
L	Minutes of homework for Lit/Comp 9	4
H	Minutes of homework for Health	5
F	Minutes of homework for Foreign Language	6
E	Minutes of homework for Elective	7

To get an A in your classes, you have realized that you need to schedule time in your day to complete homework for your classes. You have created the table of your schedule.

Based on the meaning of each variable, describe what each new variable is finding based on the given expression.

1. $A = M + S + H + E$

2. $B = P + L + F$

3. $3M$

4. $2M + 2S + 2H + 2E + 3P + 3L + 3F$

5. $M + S + H + E + P + L + F - 90$

6. $\dfrac{M+S+H+E}{4}$

7. $\dfrac{3M+3S+3H+3E+2P+2L+2F}{5}$

8. $3M + 3S + 3H + 3E + 2P + 2L + 2F - 2(90)$

Solving equations and inequalities from a context. Write the given situation as an equation or inequality and then solve it.

9.   A fitness center offers yoga classes for $10 per class and sells yoga mats for $19.95. You can pay up to $150 on fitness classes and a yoga mat. How many classes can the person take?

   a)   Write and solve an inequality that models the situation.

   b)   Interpret your solution.

   c)   Write your solution in interval notation.

10.   Your school can spend up to $1200 to buy book and magazine subscriptions for the school library. The average cost of magazine subscriptions is $30. Your school decides to spend $870 on books and the remaining amount on magazine subscriptions. How many magazine subscriptions can the school order?

   a)   Write and solve an inequality that models the situation.

   b)   Interpret your solution.

   c)   Write your solution in interval notation.

11.   A children's swimming pool has a capacity of 106 gallons. There are currently 15 gallons of water in the pool. You are filling the pool at a rate of 2 gallons per minute. How many minutes until the pool is filled?

   a)   Write and solve an equation that models the situation.

   b)   Interpret your solution.