

Homework #4 Sections 2.4, 2.5, 2.6, and 2.7**Solve the equations**

1.) $4(3 - x) = -2x - 6$

2.) $\frac{1}{2}y = \frac{1}{3} - \frac{3}{4}y$

3.) $0.3n - 4 = 0.7(2n - 3)$

For each problem a) set up an algebraic equation b) solve equation c) state results (2 points each)

4.) To get a heavy-equipment operators certificate, 48 hours of on-the-job training are required. If a woman has completed 24 hours, and training sessions last for 6 hours, how many more sessions must she take to get the certificate?

5.) The daily listening audience of an AM radio station is four times as large as that of its FM sister station. If 100,000 people listen to these two radio stations, how many listeners does the FM station have?

6.) A landscaper buried a water line around a rectangular-shaped lawn to serve as a supply line for a sprinkler system. The length of the lawn is 5 times its width. If 240 feet of pipe was used to do the job, what is the width of the lawn?

7.) In a biology course, students spend a total of 250 minutes in lab and lecture each week. The lab time is 50 minutes shorter than the lecture time. How many minutes do the students spend in lecture per week?

8.) For every problem answered correctly on an exam, 3 points are awarded. For every incorrect answer, 4 points are deducted. In a 10-question test, a student scored 16 points. How many correct and incorrect answers did he have on the exam?

9.) A preschool charges \$8 for a child to attend its morning session or \$10 to attend the afternoon session. No child can attend both. Thirty children are enrolled in the preschool. If the daily receipts are \$264, how many children attend each session?

Solve each inequality and graph the result.

10.) $4m \leq -20$

11.) $2x - 5 \geq -12 - x$

12.) $2(a - 4) > 3(a - 5)$

13.) $3x - (x - 4) < 5x - 8$

14.) $\frac{3}{4}n \geq -9$

15.) $4x - 7x + 2 < -10$

16.) $\frac{1}{2}(-4x - 6) > 2(3x - 1)$

17.) $0.4(x - 1) - 0.6 \leq 0.7x - 4$

18.) $-9y - 4 > -3(y - 5)$

For the following word problem a) set up an algebraic equation b) solve equation c) state results

19.) Alex has a budget of \$250 for his rental car. The rental company charges \$23 per day and \$0.08 per mile. If he has the car for 6 days, what is the maximum number of miles he can drive?

