

Name \_\_\_\_\_

Directions:

Clear everything off your desk except this test, a pencil/pen, and a calculator.

Show all work to receive full credit, yes that means you need to show each step.

Read the directions for each question carefully.

You will have up to **60 minutes** to complete this test. Do not spend too much time on any one problem. Skip problems and come back to them if necessary.

Please  circle or  box all your final answers.

2	3	4	5	Total
16	13	15	6	50

1. (8 pts) Solve the following equations.

(a)  $4w = 32$

(b)  $-7y = 23 - 8y$

(c)  $\frac{2x}{3} = \frac{5}{6}$

(d)  $x - (3x - 2) = 12$

(e)  $4(x + 3) + 5 = -4(2x - 1) - 2$

2. (8 pts) Solve for the given variable.

(a)  $P = 2L + 2W$  for  $L$

(b)  $A = \frac{1}{2}bh$  for  $b$

(c)  $2(x - 3w) = -3(x + w)$  for  $x$

(d)  $y = \frac{3}{4}x - 7$  for  $x$

3. (3 pts) Determine whether the following inequalities are true. (Write “T” if true and “F” if false)

(a)  $-12 > -9$

(b)  $-2 \leq -2$

(c)  $-6 > -6$

4. (10 pts) Solve each inequality and give the answer in interval notation and graph it on a number line.

(a)  $3 - 9x \leq 12$

Interval Notation:

Number Line:

(b)  $\frac{1}{6} + \frac{1}{3}x > 0$

Interval Notation:

Number Line:

(c)  $0 < 6 - 3y \leq 21$

Interval Notation:

Number Line:

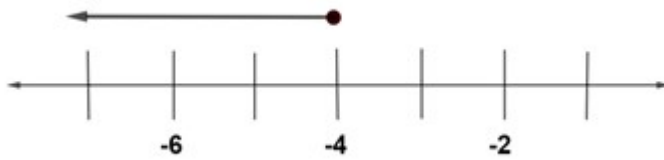
5. (12 pts) Write an equation and then solve for the following word problems.
- (a) A rectangular yard is 5 times as long as it is wide. Given that the perimeter is 480 feet, what is the length of the yard? (Hint: Draw a picture.)
  
  
  
  
  
  
  
  
  
  
  - (b) John just bought a new ATV for \$850 at a 15% discount. Find the original price of the ATV.
  
  
  
  
  
  
  
  
  
  
  - (c) Leonard scored a 70 on his midterm for his history class. In order to get a B overall, the average of his midterm and final must be between an 80 and a 90. What range of scores can he get on the final exam to get a B in the class?
  
  
  
  
  
  
  
  
  
  
  - (d) If the sum of three **consecutive integers** is 126, then what are the three numbers? (Hint: Start with “ $x$ ”)
6. (3 pts) Translate each verbal expression into an algebraic expression. Denote the unknown number as  $x$ .
- (a) One-half of a number.
  
  
  
  
  
  
  
  
  
  
  - (b) Seven divided by some number.
  
  
  
  
  
  
  
  
  
  
  - (c) The difference of some number and five.

7. (4 pts) Represent the given interval as an inequality and in interval notation.

(a)



(b)



8. (4 pts) [Chapter 1 Review] Convert 60 miles per hour to feet per second (Hint: there are 5,280 feet in a mile).

9. (2 pts) How did you prepare for this test? Please be honest and as specific as possible. Compare how you prepared for this test with how you prepared for the first test and reflect on how confident you were coming into today.