Name_____ Pd_____ Date_____ **1.D Test Study Guide**

Complete this study guide and turn in on the day of your test to earn +5 EXTRA CREDIT on the test.

<u>Directions #1 - 8:</u> Solve and graph the simple inequality.

1) $x + 5 > -9$

2) $-\frac{n}{2} \leq -9$

3) $-4m \geq 20$

4) $-\frac{x}{7} < -3$

5) $-12 > -4 + y$

6) $\frac{3}{7}b \leq -6$

7) $9 \geq \frac{3}{2}f$

8) $-10p > 50$

<u>Directions #9 - 12:</u> Solve and graph the inequality with variables on both sides. If necessary, write "all real numbers" or "no solution" to describe the solution set.

9) $3(1 - 2x) > 3 - 6x$

10) $8a + 15 \geq a - 6$

11) $-6x - 7 > -11 - 8x$

12) $-2(5 + 6n) < 40 - 12n + 8$

<u>Directions #13 - 16:</u> Solve and graph the compound inequality.

13) $-50 < 7k + 6 < -8$

14) $-36 < 3p - 6 < -15$

15) $2n + 7 \geq 27$ or $3 + 3n \leq 30$

16) $-1 - 10a < -1$ or $10 + 3a \leq -5$

<u>Directions #17 - 18:</u> Solve and graph the multi-step inequality.

17) $\frac{2w+7}{3} < 7$

18) $5 \geq \frac{5h-15}{2}$

<u>Directions #19 - 20:</u> What number is a solution to the inequality?

19) $2(v - 4) < -6$ a. -1 b. 1   c. 2   d. 3

20) $3(p - 3) < -18$ a. -2 b. -3 c. 3 d. -4

Directions #21 - 25: Follow the directions in the word problem. BE CAREFUL WHEN ROUNDING!
21) David is ordering photo prints online. Each print costs $0.06, and there is a $5 shipping fee. David has a maximum of $10 to spend. How many photos, p, can he print? Write and solve an inequality to answer the question.

22) A cardboard box can hold no more than 20 pounds of materials. Kayla is moving, and she has already packed 13 pounds of materials into the box. What range of weight, w, can she continue to pack in the box before she reaches the limit? Write and solve an inequality to answer the question.

23) Jacob wants to keep at least 10 pencils in his locker for exams. He starts with 50 pencils, but he notices that his friends often take about 3 pencils every week. How many weeks, w, can Jacob afford to let his friends take his pencils and still have enough pencils left for exams? Write and solve an inequality to answer the question.

24) A regulation volleyball must meet inside pressure requirements. The inside pressure must be no less than 0.30 kg/cm^2 and a maximum of 0.325 kg/cm^2. Write and graph a compound inequality for the possible range of inside pressures, p, that regulation volleyballs may be. (Choose the correct choice for the written inequality. Create your own graph.)

     a. $0.30 \geq p \leq 0.325$

     b. $p < 0.30$ or $p \geq 0.325$

     c. $0.30 \leq p \leq 0.325$

     d. $0.325 \leq p \leq 0.30$

25) Ms. Salgado needs to have her car repaired but does not want to spend more than $225 for the repairs. The mechanic says that the part needed for the repair will cost $78, and that labor will cost an additional $35 per hour. How many hours, h, can Ms. Salgado afford to pay the mechanic? Write and solve an inequality to answer the question.

26) Rajae gets a weekly allowance of $5 plus the amount, a, he makes selling candy, and his weekly income is always at least $10. How much must he be making selling candy?   Write and solve an inequality to answer the question.

27) A minimum of 5 people can make a basketball team, but in order to have enough jerseys, no more than 16 people can be on the team. Write and graph a compound inequality for the possible range of team members, m, can be on the team. (Choose the correct choice for the written inequality. Create your own graph.)

     a. $5 < m < 16$

     b. $m \leq 5$ or $m \leq 16$

     c. $16 \leq m \leq 5$

     d. $5 \leq m \leq 16$