INEQUALITIES TEST REVIEW

NAME:_____

INEQUALITIES (AND SOME MULTI-VARIABLE EQUATIONS)

Determine whether each number is a solution of the given inequality.

1. $x > -12$ a. -12 b. -15 c. 0

2. $x - 5 \leq 0$ a. -6 b. 0 c. 5

3. $2x + 1 \geq -5$ a. -4 b. -2 c. 4

Write an inequality to model each situation.

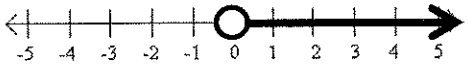
4. At least 35 students needed their schedule changed before school started.

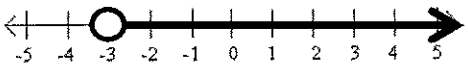
5. The speed limit on the highway is 70 mph.

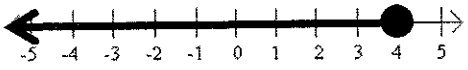
6. Mr Moundros can afford to spend up to $40 on a new wig.

Write an inequality for each graph.

7. 

8. 

9. 

10. 

Solve each inequality and graph the solution.

11. $12 + v \leq 19$

12. $-9n \geq -36$

13. $-5x + 12 \leq -18$

14. $16 - u > 10$

15. $-4m + 12 > 4(m - 1)$

16. $-3 - 4(2x - 1) + 4x > 7 - 1 - 6 - 11$

17. Bob originally had 15 cards. Then, John gave him k cards. Bob now has more than 49 cards. Which best describes Bob's current amount of cards?

a. $k - 15 > 49$ b. $k + 15 < 49$ c. $k + 15 > 49$ d. $k - 15 < 49$

18. Tim is a waiter at a restaurant. One evening he earned $126 in tips. He also earns $6 an hour. In all, Tim earned more than $160 for his shift? Which best describes the number of hours that Tim must have worked that evening?

a. $126x + 6 > 160$ b. $160 > 6x + 126$ c. $126 + 6x > 160$ d. $132x > 160$

Write, solve, and graph each inequality.

19. The bus ride to camp will take at least 62 minutes. If we have already been driving for 40 minutes, how much longer will the bus ride be?

20. A homeroom class with 25 students is holding a fundraiser to raise money for charity around the holidays. Their goal is to raise at least $200. On average, how much money does each student need to contribute to meet or exceed the goal?

21. You have $22 to spend at the candy shop (yummy)! If each Twix bar costs $1.25, how many can you buy?

Solve for the specified variable.

22. $F = ma$ for a

23. $AP = F$ for P

24. $a = \frac{v_f - v_i}{t}$ for t

25. $s = \frac{d}{t}$ for d

26. $PV = nRT$ for T

27. $4a - b = c$ for a

28. Density is a measurement of an objects mass per unit volume ($D = \frac{m}{V}$). Solve the equation for "m". Then find the mass of an object that has a volume of 34 cm^3 and a density of 6 g/cm^3?

ANSWERS:

1) c
2) a, b, c
3) b, c
4) $x \geq 35$
5) $x \leq 70$
6) $x \leq 40$
7) $x \geq -1$
8) $x > 0$
9) $x > -3$
10) $x \leq 4$
11) $v \leq 7$
12) $n \leq 4$
13) $x \geq 6$
14) $u < 6$
15) $2 > m$
16) $X < 3$
17) C
18) C
19) $x \geq 22$
20) $x \geq 8$
21) $x \leq 17$
22) F/m = a
23) P = F/A
24) $t = \frac{vf - vi}{a}$
25) ts = d
26) $\frac{PV}{nR} = T$
27) $a = \frac{c+b}{4}$
28) 204 g