Name: _____ Period: _____

Unit 6 Review

Solve the following equations. Be sure to check your answer.

1. $6 = \frac{a}{4} + 2$

2. $9x - 7 = -7$

3. $0 = 4 + \frac{n}{5}$

4. $8n + 7 = 31$

5. $-15 = -4m + 5$

6. $\frac{m}{9} - 1 = -2$

Solve the following equations.

7. $3(x + 6) = -42$

8. $-8v + 10 + 2v = -104$

9. $-10 = 10(k - 9)$

10. $23 = \frac{1}{2}(x + 20)$

11. $(x + 9)\frac{1}{3} = 11$

12. $3x - 18 - 15x = 126$

Write an equation for the following word problems and solve them.

13. **Jessica bought four hats. A week later half of her hats were destroyed in a fire. There are now only 14 hats left. How many hats did she start with?**

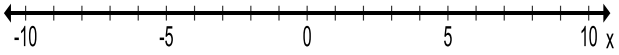
14. **Trevor spent half of his weekly allowance playing arcade games. To earn extra money his parents let him weed the garden for $7. What is his weekly allowance if he ended with $13?**

15. **139 students went on a field trip. 3 buses were filled and 19 students traveled in cars. How many students were in each bus?**

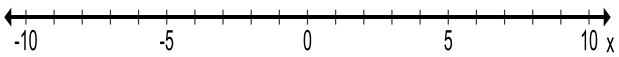
16. **A wise man once said "500 reduced by 3 times my age is 305". What is his age?**

Solve and graph the following inequalities.

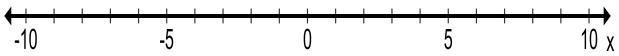
17. $3x - 8 \geq 13$



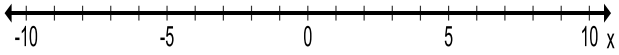
18. $8 \leq -x - 12$



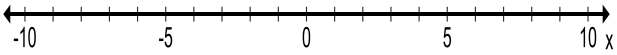
19. $14 > -x - 13$



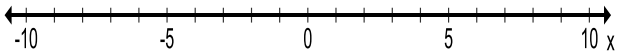
20. $-18 < -2x - 12$



21. $-6(x + 9) > 6$



22. $-7x + 5 + x \leq 47$



23. Evaluate $\left(-3-\frac{4}{-4}\right)(-6)$

24. $\frac{(15-3)2}{-4}$

25. x^2+18-y^3 *for* $x=-2$ *and* $y=3$

26. Evaluate: $1\frac{2}{5}-\frac{3}{4}$

27. Evaluate: $3\frac{1}{3}\div 2\frac{1}{4}$

28. Evaluate: $6\frac{1}{2}-3$

29. Evaluate: $\frac{4}{3}+\frac{1}{6}$