**2nd Semester Midterm Review** Name:\_\_\_\_\_\_\_\_\_\_\_\_\_

Algebra 1Foundations Period:\_\_\_\_\_\_\_\_\_\_\_\_\_

Solve the following equations. Show the algebraic steps used and check the problems with an \* by them.

1. $m-20=-15$ 2. $7-x=29$ \*3. $100=\frac{c}{-8}$ check

4. $-12+6m=-18$ 5. $-10-3r=23$ \*6. $\frac{x+5}{3}=-5$

7. $25=7+3k-12$ 8. $-10=5\left(2w-4\right)$ \*9. $15-p-p=-17$

10. $-5\left(x-3\right)=-25$ 11. $4\left(h-1\right)=2h+8$ \*12. $3m+2=-2m-13$

Solve for the variable indicated.

13. $D=S∙T$ Solve for T 14. $D=\frac{M}{V}$ Solve for M

15. $7x+y=23$ Solve for y 16. $9x-3y=12$ Solve for y

Simplify each expression by combining like terms.

17. $15y-7-8y$ 18. $n+4-9-5n$

19. $9a+10\left(7a-4\right)$ 20. $-4r-\left(12-8r\right)$

Simplify using the order of operations.

21. $5-5\left(2-4\right)$ 22. $\left(6\left(-3\right)-2\right)4÷2$ 23. $\left(100÷25+25\right)$

24. $\frac{-2-2\left(8-10\right)}{2}$ 25. $55÷11\left(8-12\right)$ 26. $\frac{30+(-6)}{4}+\frac{(-4∙3)}{4}$

Evaluate for a = 5, b = -1, c = 0 and d = 3.

27. $3\left(a-7\right)-d$ 28. $ab+b-a$ 29. $b+c\left(7a-d\right)$

Solve each proportion using cross products.

30. $\frac{6}{a}=\frac{-4}{6}$ 31. $\frac{x}{-3}=\frac{10}{-6}$ 32. $\frac{2}{8}=\frac{-1}{w+2}$

Solve each percent problem.

**33.**  What percent of 60 is 18? 34. 30% of what number is 24?

35. What number is 15% of 40?

36. On the last test Sam answered 64 problems correctly. This was 80% of

 the questions. How many questions were on the test?

37. Complete the following chart with the missing equivalents.

|  |  |  |
| --- | --- | --- |
| **Percent** | **Fraction** | **Decimal** |
| $35\%$ |  |  |
|  | $\frac{7}{10}$ |  |
|  |  | $.43$ |
| $6\%$ |  |  |