Beverly Hills High School -- Algebra 1 -- Quest #2 -- Chapter 1 -- 85 points

Always show your work. Partial credit for partial performance. Pencils only. Be clear, complete and neat.
All problems are three points unless specified otherwise. Always reduce fractions too.

Find each sum, difference, product, quotient or root as indicated. Simplify if possible.

1)   36 - 73 - 28 - 46 + 94 =

2)   -4.82 + 7.91 + 8.58 - 11.63 =

3)   142 - (-65) - 176 + 44 =

4)   -5(12 + 4) + 17(3 + 1) =

5) $-2\frac{3}{10} + 1\frac{2}{5} =$

6) $3t + \frac{3}{4}t - \frac{7}{4}t =$

7) Chuy had $348.24 in his checking account. He wrote two checks, one for $96.45 and the other for $138.35.
Then he deposited another $56.50. What is the new balance in Chuy's account?

8)   7(-8) =

9)   (-5)(2a)(-3) =

10) $(-0.7)^2 =$

11) $\frac{5(-8)}{-4} =$

12) $\frac{-12}{5} \cdot \frac{20}{-36} =$

13) $\sqrt{.81}$

Use the Distributive Property to simplify each expression.

14) $9(2x - 4) =$

15) $6(\frac{2}{3}n + \frac{1}{6}) =$

16) $-(4y - 3y^2 + 6) =$

17) Four points on this one. The tax an electrician must charge for a service call is given by the expression 0.08(45 + 35h) where h is the number of hours the job takes. Rewrite this expression using the distributive property. What is the tax he must charge for a job taking six hours?

Simplify each expression.

18) $-7xy^2 - 5x^2y + 8xy + 4xy^2 + 5x^2y =$

19) $8(4 - 3z) + 5(2z + 7) - (6z - 9) =$

20) $\frac{42t - 36}{-6} =$

21) $\frac{117 - 39a}{-26} =$

22) Four points on this one. Is $(\frac{-3}{4}, -2)$ a solution to the equation $24x + 9y = 0$? Show why, yes or no. Whether it is or not, state another ordered pair that is a solution.

23) Four points on this one. Xochitl earns $14.25 an hour as a seamstress, making fine apparel for men. Express this as both an equation and by using a table of values (at least four pair of values).

24) All bright women have class. Rhonda is a bright woman. Therefore, _____

_____. What kind of logic did you employ? _____.

25) Consider counting in base sixteen. What are the three numbers following DE_{16}?

_____   _____   _____

26) Perform the following operation in base five:

$$32423_5$$
$$+4143_5$$

27) Perform the following operation in base sixteen:

$$B85A_{16}$$
$$+2EA9_{16}$$

28) How much is 439 in binary?

EXTRA CREDIT Section. Guessing is okay. Three points each.

29) In your space travels you encounter a race of beings with only seven fingers total. Thus they do their math in base seven. How much is 58_7 x 26_7 in base seven?

30) Convert 4623_7 to decimal.