LT 1 Study Helper

1) Solve the following correctly

a) $4 + 8(7 - 5)^2 = 36$

b) $\frac{7 \cdot 4}{2\sqrt{12^2 - (2^6 \cdot 2)}} = 6$

c) $(9 - 3)^2 + (4 - 8)^3 = -28$

d) $13 - 2(3^3 - 4 * 10) = 39$

2) **Solve and Explain** the following problems

a) What is

$(-1)^{536} + (-1)^{6357}$

b) What is $(x^4)^2$? Explain why using expanded form, then give name of the property

c) Solve $x^5 * x^4 =$ Explain why using expanded form, then give name of the property

d) Solve $\frac{x^5}{x^2}$ Explain why using expanded form, then give name of property

3) Solve the following problems. Prove that the answer works by plugging back in

a) x + (-6) =- 7

b) $\frac{x}{3}$=- 5

c) 8x =-64

d) x - (-5) = 18

4) Multiply the following binomials

a) $(3x-5)(4x+6)=12x^2-2x-30$

b) $(4x-3y)(4x+y)= 16x^2-3y^2-8xy$

c) $(3x^2-2x+3)(4x-3)= 12x^3-17x^2+18x-9$

d) $(2x+3y+z)(3x-2y-z)= 6x^2+5xy+xz-6y^2-5yz-z^2$

5) Solve the following by simplifying all values. Also leave all exponents positive

a) $\frac{(2x^{12})^3}{5x^6}= \frac{8x^{30}}{5}$

b) $\frac{5x^6*(2x^5)^4}{10x^3}=8x^{23}$

c) $\frac{18x^3(3x^4)^1}{9x^{10}}= \frac{6}{x^3}$

d) $(\frac{(42-7\sqrt{12-11}+11^2}{(16-13)^2})^0+2=$