Review for Unit 1 Test Part 2

Exponent Laws

(1) $(4x^3y^6)^3$ (2) $(5x^2y^4)^3$ (3) $b^3 \cdot b^4 \cdot b \cdot b^2$

(4) $\dfrac{22y^6z^8}{2yz^{-7}}$ (5) $\dfrac{xy^7}{x^3y^4}$ (6) $\left(\dfrac{3m^2n^7}{m}\right)^5$

(7) $(2x^3y^4)(6x^5y^2)$ (8) $\left(\dfrac{24z^{-2}x^4y^2}{12z^4x^8y^2}\right)^2$

Convert from radical form to rational Exponent Form

(9) $\sqrt{x^3}$ (10) $\sqrt[4]{(xy)^2}$ (11) $\sqrt[3]{7y^4}$ (12) $\sqrt[8]{x^2}$

Solve by using square root method
(some answers will be real or complex #'s)

(17) $m^2 + 7 = 6$

(18) $x^2 - 1 = -82$

(19) $(2k-1)^2 = 9$

(20) $10(x-7)^2 = 440$

(21) $-2(x-1)^2 = 36$

(22) $3x^2 + 40 = -x^2 - 56$

Simplify the radical

(23) $\sqrt{-1}$

(24) $\sqrt{-72}$

(25) $\sqrt{-200}$

(26) $\sqrt{-48}$

Solve by using Quadratic Formula (some may be real / complex answers)

(13) $0 = 5x^2 - 10x + 30$

(14) $-3x^2 = -6x + 8$

(15) $x^2 - 12x - 28 = 0$

(16) $x^2 + 8x - 1 = 0$