Algebra I Homework #16

1) Simplify: $\dfrac{144x^2y^3a^4 - 64x^4y^4a^2 + 84x^2y^5a}{72x^3ya^2}$

2) Simplify: $\dfrac{3x - 7 + x^4}{x + 2}$

3) Write 93,100,000,000 in scientific notation.

4) Simplify: $\dfrac{-3x - y^3}{-a^2 - c}$ if a = -3, c = -5, x = -4, and y = -2

5) Simplify: $\dfrac{8}{27} \div (\dfrac{16}{54} \cdot \dfrac{72}{81}) + \dfrac{1}{12}$

6) Simplify: $\sqrt{72x^2ya^5}$

7) Simplify: $3\sqrt{242} - 2\sqrt{125} + \sqrt{338}$

8) Simplify: $5\sqrt{468} \cdot 7\sqrt{650}$

9) Simplify: $\sqrt[3]{686x^7y^4a^2}$

10) Simplify: $4x\sqrt{24x^7y^2a^3} + 3\sqrt{98x^2y^3a^4} - 2ax^2\sqrt{54x^5y^2a}$

11) Simplify: $6x^2y^3a\sqrt{486x^5y^2a^3} \cdot 4xya^2\sqrt{735x^3y^5a}$

12) Simplify: $\sqrt[5]{729x^7}$

13) Simplify: $12\sqrt{96x^5y^7} - 5x\sqrt{294x^3y^7} + 3xy\sqrt{216x^3y^5}$

14) Simplify: $(\sqrt{24} - \sqrt{18})(\sqrt{50} + \sqrt{108})$

15) Simplify: $\sqrt{1331x^3y^5a^2}$

16) Simplify: $9\sqrt{192x^4y^5a^2} - x\sqrt{243x^2y^5a^2} - 4ay\sqrt{450x^5y^2a}$

17) Simplify: $2x^2\sqrt{539x^3y^5a^3} \cdot 3a^2y\sqrt{1859x^5y^3a}$

18) Simplify: $\sqrt[3]{1029x^4y^3a^{10}}$

19) Simplify: $15\sqrt{637} + 3\sqrt{3072} - 2\sqrt{1573}$

20) Simplify: $(6\sqrt{27x^3a^2} - 4\sqrt{96x^2a^3})(3x\sqrt{225xa^2} - 2a\sqrt{32x^2a})$