**Math 114 Assignment7.3** Name:_____

**DIRECTIONS** To receive full credit, you must provide complete solutions to the following problems in the space provided. Transfer all your answers to the space provided on the test paper.

1. Use the product rule to multiply $\sqrt{2}\sqrt{6}$ Ans_____

2. Use the product rule to multiply $\sqrt{x+1}\sqrt{x-1}$ Ans_____

3. Use the product rule to multiply $\sqrt{\frac{2x}{3}}\sqrt{\frac{3}{2}}$ Ans_____

4. Use the product rule to multiply $\sqrt[5]{3x^2y}\cdot\sqrt[5]{2xy}$ Ans_____

5. Write using simplified from of radicals $\sqrt{45}$ Ans_____

6. Write using simplified from of radicals $\sqrt[3]{54}$ Ans_____

7. Express the function in simplified form $f(x)=\sqrt{9(x-2)^2}$ Ans_____

8. Write using simplified from of radicals $\sqrt{8x^5}$ Ans_____
(Nonnegative radicand)

9. Write using simplified from of radicals $\sqrt[4]{80x^{10}}$ Ans_____
(Nonnegative radicand)

10. Write using simplified from of radicals $\sqrt{5x^3}\sqrt{8x^2}$ Ans_____
(Nonnegative radicand)

11. Write using simplified from of radicals $\sqrt[3]{6x^7y}\sqrt[3]{9x^4y^{12}}$ Ans_____
(Nonnegative radicand)

12. Write using simplified from of radicals Ans_____
(Nonnegative radicand)

$$\sqrt{(x-y)^3}\cdot\sqrt{(x-y)^6}$$