Name: _____

Rationalizing Denominators & Numerators

Exercise 1: Rationalize the denominator and simplify each expression. Leave your answer in radical form.

1) $\frac{\sqrt{3}}{\sqrt{7}}$

2) $\frac{\sqrt{2}}{\sqrt{8}}$

3) $\frac{\sqrt{4}}{\sqrt{5}}$

4) $\frac{2\sqrt{11}}{3\sqrt{5}}$

5) $\frac{5\sqrt{7}}{7\sqrt{5}}$

6) $\frac{2\sqrt{10}}{5\sqrt{6}}$

7) $-\frac{\sqrt{7}}{\sqrt{6}}$

8) $\frac{-\sqrt{18}}{4\sqrt{81}}$

9) $\frac{6}{2+\sqrt{5}}$

10) $\frac{-9}{1+2\sqrt{3}}$

11) $\frac{5}{1+3\sqrt{2}}$

12) $\frac{12}{3-7\sqrt{3}}$

13) $\frac{4-\sqrt{3}}{5+\sqrt{2}}$

14) $\frac{6-\sqrt{2}}{1+\sqrt{3}}$

15) $\frac{-\sqrt{4}+1}{\sqrt{4}-1}$

16) $\frac{3-\sqrt{2}}{3+\sqrt{2}}$

17) $\frac{7-\sqrt{14}}{7+\sqrt{14}}$

18) $\frac{8}{\sqrt{3}-\sqrt{7}}$

19) $\frac{-11}{\sqrt{5}-2\sqrt{3}}$

20) $\frac{2-\sqrt{2}}{\sqrt{11}-\sqrt{8}}$

21) $\frac{5-\sqrt{6}}{\sqrt{13}+\sqrt{7}}$

22) $\frac{6}{7\sqrt{2}-2\sqrt{7}}$

23) $\frac{1-\sqrt{3}}{\sqrt{8}+\sqrt{5}}$

24) $\frac{-7\sqrt{3}}{\sqrt{7}+2\sqrt{3}}$

Exercise 2: Latoya says that, in simplest form, the expression $\frac{2}{3+\sqrt{5}}$ is written as $\frac{6-2\sqrt{5}}{4}$.Greg disagrees. He says it should be written as $\frac{3-\sqrt{5}}{2}$.Who is correct? Explain your reasoning.