Math1210 Daily Quiz 9 (Fractions/Rules of Exponents) Spring, 2014 Special number: _____

uid number: _____ Instructor: Kelly MacArthur

Instructions: Please show all of your work as partial credit will be given where appropriate, **and** there may be no credit given for problems where there is no work shown. All answers should be completely simplified, unless otherwise stated. No calculators or electronics of any kind are allowed.

Simplify each expression.

(a) $\frac{4}{15}-\frac{7}{27}=\frac{4}{15}\left(\frac{9}{9}\right)-\frac{7}{27}\left(\frac{5}{5}\right)=\frac{36-35}{135}=\frac{1}{135}$

(b) $\frac{\frac{3}{5}+\frac{1}{15}}{4}=\frac{\frac{9+1}{15}}{4}=\frac{\frac{10}{15}}{4}=\frac{\frac{2}{3}}{4}=\frac{2}{3(4)}=\frac{1}{6}$

(c) $\left(\frac{\frac{3}{5}+\frac{1}{15}}{4}\right)^{-1}=\left(\frac{1}{6}\right)^{-1}$ (from part (b) answer)$=6$

(d) $\frac{\frac{1}{3}}{200}=\frac{1}{3}\div 200=\frac{1}{3}\cdot\frac{1}{200}=\frac{1}{600}$

(e) $\frac{100}{\frac{3}{2}}=100\div\frac{3}{2}=100\cdot\frac{2}{3}=\frac{200}{3}$

(f) $(81)^{3/4}=(3^4)^{3/4}=3^3=27$

(g) $(-1)^{-1}=\frac{1}{(-1)^1}=-1$

(h) $\frac{3^{-1}\cdot 2^3}{3^2\cdot 2^2}=\frac{2^{3-2}}{3^{2+1}}=\frac{2}{27}$

(I) $x^{-1/2}x^3x=x^{-1/2+3+1}=x^{7/2}$ or $x^3\sqrt{x}$

(j) $\frac{2x^2+3x-5}{3x-5}$ There is no further simplifying you can do to this expression.