Name_____ Date_____

Honors Algebra II - Practice Complex Fractions Period_____

Simplify the following expressions.

1) $\dfrac{\dfrac{7a}{b}}{\dfrac{21a}{4b}}$

2) $\dfrac{4-\dfrac{3}{5}}{6+\dfrac{1}{5}}$

3) $\dfrac{\dfrac{9c^2}{5d}}{\dfrac{18c^2}{}}$

4) $\dfrac{\dfrac{9p^2}{5q}}{\dfrac{27p}{10q^2}}$

5) $\dfrac{\dfrac{4}{c}}{5-\dfrac{2}{c}}$

6) $\dfrac{\dfrac{t}{5}+w}{\dfrac{t}{5}-w}$

7) $\dfrac{\dfrac{5}{x}-\dfrac{2}{y}}{\dfrac{2}{x}+\dfrac{3}{y}}$

8) $\dfrac{1+\dfrac{2}{x+1}}{x+\dfrac{x-2}{x}}$

9) $\dfrac{\dfrac{3}{w+z}-1}{1+\dfrac{6}{w+z}}$

10) $\dfrac{2k-\dfrac{3-k}{k}}{2k^2+3k}$

11) $\dfrac{c+2+\dfrac{3}{c+7}}{c-6+\dfrac{5}{c+4}}$

12) $\dfrac{\dfrac{4x^2-10}{x^2-3x-28}}{\dfrac{x+3}{x+4}+\dfrac{x+9}{x-7}}$

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Simplify the following expressions.

1) $\dfrac{\frac{7a}{b}}{\frac{21a}{4b}} \cdot \dfrac{4b}{21a} = \dfrac{4}{3}$

2) $\dfrac{\frac{20}{5}4-\frac{3}{5}}{\frac{30}{5}6+\frac{1}{5}} = \dfrac{\frac{17}{5}}{\frac{31}{5}} = \dfrac{17}{31}$

3) $\dfrac{\frac{9c^2}{5d}}{\frac{18c^2}{1}} = \dfrac{1}{10d}$

4) $\dfrac{\frac{9p^2}{5q}}{\frac{27p}{10q^2}} \cdot \dfrac{10q^2}{27p} = \dfrac{2pq}{3}$

5) $\dfrac{\frac{4}{c}}{\frac{5c}{c}-\frac{2}{c}} = \dfrac{4}{5c-2}$

$\frac{5c-2}{c}$

6) $\dfrac{\frac{t}{5}+w\frac{5w}{5}}{\frac{t}{5}-w\frac{5w}{5}} = \dfrac{t+5w}{t-5w}$

7) $\dfrac{\frac{5}{x}-\frac{2}{y}}{\frac{2}{x}+\frac{3}{y}} \dfrac{\frac{5y-2x}{xy}}{\frac{2y+3x}{xy}} = \dfrac{5y-2x}{2y+3x}$

8) $\dfrac{\frac{x+1}{x}+\frac{2}{x+1}}{\frac{x^2}{x}+\frac{x-2}{x}} \dfrac{\frac{x+3}{x+1}}{\frac{y^2+x-2}{x}} \cdot \dfrac{x}{(x+2)(x-1)} = \dfrac{x(x+3)}{(x^2-1)(x+2)}$

9) $\dfrac{\frac{3}{w+z}-1\frac{(w+z)}{w+z}}{\frac{w+z}{w+z}1+\frac{6}{w+z}} = \dfrac{3-w-z}{w+z+6}$

10) $\dfrac{\frac{K}{K}\frac{2k}{k}-\frac{3-k}{k}}{\frac{2k^2+3k}{1}} \dfrac{2K^2+K-3}{2K^2+3K} = \dfrac{(2k+3)(K-1)}{K(2K+3)}$

$= \dfrac{K-1}{K^2}$

11) $\dfrac{c+2+\frac{3}{c+7}}{c-6+\frac{5}{c+4}} \dfrac{c^2+9c+17}{c+7} \cdot \dfrac{c+4}{c^2-2c-19}$

12) $\dfrac{\frac{4x^2-10}{x^2-3x-28}}{\frac{x+3}{x+4}+\frac{x+9}{x-7}} = \dfrac{2(2x^2-5)}{2x^2+9x+15}$