REVIEW: Evaluating Complex Fractions

Name _____

Key Concept and Vocabulary

A complex fraction is a fraction that contains a fraction in its numerator, denominator, or both. To simplify a complex fraction, divide its numerator by its denominator.

Algebra: $\dfrac{\frac{a}{b}}{\frac{c}{d}} = \dfrac{a}{b} \div \dfrac{c}{d} = \dfrac{a}{b} \cdot \dfrac{d}{c}$, where $b, c, d \neq 0$

Numbers: $\dfrac{\frac{2}{3}}{\frac{5}{6}} = \dfrac{2}{3} \div \dfrac{5}{6} = \dfrac{2}{3} \cdot \dfrac{6}{5} = \dfrac{12}{15} = \dfrac{4}{5}$

Skill Examples

1. $\dfrac{\frac{5}{8}}{4} = \dfrac{5}{8} \div 4 = \dfrac{5}{8} \cdot \dfrac{1}{4} = \dfrac{5}{32}$

2. $\dfrac{15}{\frac{9}{10}} = 15 \div \dfrac{9}{10} = \dfrac{15}{1} \cdot \dfrac{10}{9} = \dfrac{150}{9} = \dfrac{50}{3}$

3. $\dfrac{\frac{1}{3}}{\frac{5}{7}} = \dfrac{1}{3} \div \dfrac{5}{7} = \dfrac{1}{3} \cdot \dfrac{7}{5} = \dfrac{7}{15}$

4. $\dfrac{\frac{9}{16}}{\frac{3}{8}} = \dfrac{9}{16} \div \dfrac{3}{8} = \dfrac{9}{16} \cdot \dfrac{8}{3} = \dfrac{72}{48} = \dfrac{3}{2}$

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Simplify the complex fraction.

5. $\dfrac{\frac{3}{2}}{6} =$ _____

6. $\dfrac{20}{\frac{4}{5}} =$ _____

7. $\dfrac{\frac{9}{2}}{\frac{12}{7}} =$ _____

8. $\dfrac{\frac{7}{10}}{\frac{9}{20}} =$ _____

9. $\dfrac{\frac{2}{3}}{\frac{16}{27}} =$ _____

10. $\dfrac{5}{\frac{7}{10}} =$ _____

11. $\dfrac{\frac{12}{17}}{8} =$ _____

12. $\dfrac{\frac{3}{14}}{\frac{13}{49}} =$ _____

13. $\dfrac{\frac{27}{32}}{\frac{7}{8}} =$ _____

14. $\dfrac{\frac{9}{10}}{3} =$ _____

15. $\dfrac{6}{\frac{1}{6}} =$ _____

16. $\dfrac{\frac{4}{5}}{\frac{22}{25}} =$ _____

17. $\dfrac{24}{\frac{18}{7}} =$ _____

18. $\dfrac{\frac{1}{4}}{\frac{1}{10}} =$ _____

19. $\dfrac{\frac{3}{5}}{16} =$ _____

20. $\dfrac{\frac{16}{21}}{\frac{8}{9}} =$ _____