Finding Equivalent Fractions and Simplest Form

Write an equivalent fraction for each fraction. You may choose the number to multiply the numerator and denominator by.

1. \( \frac{1}{2} = \) _____  
2. \( \frac{2}{5} = \) _____  
3. \( \frac{3}{4} = \) _____  
4. \( \frac{1}{6} = \) _____  
5. \( \frac{7}{8} = \) _____  
6. \( \frac{1}{3} = \) _____  
7. \( \frac{2}{7} = \) _____  
8. \( \frac{5}{9} = \) _____

9. Simplify the fraction \( \frac{4}{8} \).

\[
\frac{4}{8} \text{ simplifies to } \frac{\phantom{0}}{\phantom{0}} \text{ which simplifies to } \frac{\phantom{0}}{\phantom{0}}.
\]

10. Simplify the fraction \( \frac{16}{24} \).

\[
\frac{16}{24} \text{ simplifies to } \frac{\phantom{0}}{\phantom{0}} \text{ which simplifies to } \frac{\phantom{0}}{\phantom{0}}.
\]

Simplify each fraction using division.

11. \( \frac{10}{14} = \) ________  
12. \( \frac{8}{12} = \) ________  
13. \( \frac{9}{15} = \) ________

14. \( \frac{6}{12} = \) ________  
15. \( \frac{12}{18} = \) ________  
16. \( \frac{9}{12} = \) ________

17. Circle the fractions that cannot be simplified.
   a. \( \frac{6}{9} \)  
   b. \( \frac{7}{8} \)  
   c. \( \frac{3}{4} \)  
   d. \( \frac{9}{10} \)

**Hint:** If there is no number that divides evenly into both the numerator and denominator, they cannot be simplified.
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**CRITICAL THINKING AND PROBLEM SOLVING**

18. Circle the fraction below that is not equivalent to \(\frac{1}{3}\). How did you decide that it is NOT equivalent?

\[
\frac{3}{9} \quad \frac{6}{18} \quad \frac{6}{12} \quad \frac{2}{6}
\]

19. Circle the fraction below that is not equivalent to \(\frac{1}{4}\). How did you decide that it is NOT equivalent?

\[
\frac{2}{8} \quad \frac{3}{12} \quad \frac{5}{15} \quad \frac{5}{20}
\]

20. Circle the fraction below that is not equivalent to \(\frac{3}{5}\). How did you decide that it is NOT equivalent?

\[
\frac{9}{15} \quad \frac{12}{20} \quad \frac{8}{10} \quad \frac{15}{25}
\]

21. A package of candies has 100 pieces. There are 10 blue pieces, 25 red pieces, and 15 green pieces. The rest are yellow. What fraction of the candies are yellow?

\[
\text{of the candies are yellow.}
\]

22. A bag of 50 marbles contains 2 aggies, 10 rainbow, 13 plain, and 10 peppermint stick. The rest are cat's eye marbles. What fraction of the marbles are cat's eye marbles?

\[
\text{of the marbles are cat's eye marbles.}
\]

23. There are 24 students in a class. Fourteen are girls. What fraction of the students are boys?

\[
\text{of the students are boys.}
\]