REVIEW: Comparing and Ordering Fractions

Name _____

Key Concept and Vocabulary

$\frac{2}{3} \; ? \; \frac{3}{4}$

$\frac{2}{3} = \frac{2 \times 4}{3 \times 4} = \frac{8}{12}$ $\quad$ $\frac{3}{4} = \frac{3 \times 3}{4 \times 3} = \frac{9}{12}$

Use a like denominator.

$\frac{8}{12} < \frac{9}{12}$ $\quad$ So, $\frac{2}{3} < \frac{3}{4}$.

Visual Model

$\frac{2}{3}$

$\frac{3}{4}$

$\frac{2}{3} < \frac{3}{4}$

Skill Examples

1. $\frac{1}{2} > \frac{5}{12}$ because $\frac{1}{2} = \frac{6}{12}$, and $\frac{6}{12} > \frac{5}{12}$.
2. $\frac{3}{8} < \frac{2}{5}$ because $\frac{3}{8} = \frac{15}{40}$, $\frac{2}{5} = \frac{16}{40}$, and $\frac{15}{40} < \frac{16}{40}$.
3. Order from least to greatest: $\frac{3}{4}$, $\frac{3}{8}$, and $\frac{1}{8}$.

   $\frac{1}{8}, \frac{3}{8}, \frac{3}{4}$ because $\frac{1}{8} < \frac{3}{8}$, $\frac{3}{4} = \frac{6}{8}$, and $\frac{6}{8} > \frac{3}{8}$.

Application Example

4. You run $\frac{7}{8}$ mile. Your friend runs $\frac{8}{10}$ mile. Who runs farther?

   $\frac{7}{8} > \frac{8}{10}$ because $\frac{7}{8} = \frac{70}{80}$, $\frac{8}{10} = \frac{64}{80}$, and $\frac{70}{80} > \frac{64}{80}$.

   ∴ You run farther.

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Compare.

5. $\frac{4}{5}$ [>] $\frac{3}{5}$
6. $\frac{1}{2}$ [>] $\frac{1}{6}$
7. $\frac{3}{4}$ [<] $\frac{7}{8}$
8. $\frac{2}{3}$ [<] $\frac{5}{6}$
9. $\frac{1}{4}$ [<] $\frac{3}{10}$
10. $\frac{3}{9}$ [=] $\frac{1}{3}$
11. $\frac{7}{10}$ [>] $\frac{9}{20}$
12. $\frac{7}{12}$ [>] $\frac{3}{8}$

Order the fractions from least to greatest.

13. $\frac{5}{6}, \frac{1}{2}, \frac{5}{8}$ — $\frac{1}{2}, \frac{5}{8}, \frac{5}{6}$
14. $\frac{4}{5}, \frac{17}{20}, \frac{3}{4}$ — $\frac{3}{4}, \frac{4}{5}, \frac{17}{20}$
15. $\frac{2}{3}, \frac{7}{12}, \frac{3}{8}$ — $\frac{3}{8}, \frac{7}{12}, \frac{2}{3}$
16. $\frac{1}{3}, \frac{33}{100}, \frac{3}{5}$ — $\frac{33}{100}, \frac{1}{3}, \frac{3}{5}$

17. **PEANUTS** You have $\frac{4}{5}$ pound of peanuts. Your friend has $\frac{5}{6}$ pound of peanuts. whose peanuts weigh more? your friend's

18. **ORDERING FRACTIONS** Graph the fractions on the number line and order them from least to greatest: $\frac{6}{8}, \frac{1}{4}, \frac{1}{3}$, and $\frac{5}{12}$.

$\frac{1}{4}, \frac{1}{3}, \frac{5}{12}, \frac{6}{8}$