

# L22-30 Test Review

Shape

Operate

Simpl. fy

+/-

Shape: Common denominators  
LCM  $\rightarrow$  LCD

Operate: +/- whole #'s  $\rightarrow$  borrow from whole  
+/- numerators  $\hookrightarrow 1 \rightarrow \frac{3}{3}$

Simpl. fy: Reduce to lowest terms  
Make improper  $\rightarrow$  mixed #'s

$$\frac{2 \times 7}{5 \times 7} + \frac{4 \times 5}{7 \times 5}$$

LCM  $\rightarrow$  LCD  
7, 14, 21, 28, 35

$$\frac{14}{35} + \frac{20}{35} = \frac{34}{35}$$

$$4 \frac{1 \times 2}{3 \times 2} - 2 \frac{1 \times 3}{2 \times 3}$$

$$\begin{aligned} & \rightarrow \frac{8}{6} - 2 \frac{3}{6} \\ & \frac{8}{6} - 2 \frac{3}{6} \\ & 3 \frac{2}{6} - 2 \frac{3}{6} \\ & \frac{1}{6} \end{aligned}$$

X]

Shape: fraction

Mixed  $\rightarrow$  Improper

$$W \frac{n}{d} \rightarrow \frac{(w \cdot d) + n}{d}$$

Operate:  $\frac{n \times n}{d \times n}$ , cross cancel if possible

Simplify: reduce to lowest terms  
improper  $\rightarrow$  mixed #'s

$$\frac{2}{3} \cdot \frac{1}{3} = \frac{2 \cdot 1}{3 \cdot 3} = \left(\frac{2}{9}\right)$$

$$\frac{3}{\cancel{5}^5} \cdot \frac{\cancel{25}^5}{26} = \left(\frac{15}{26}\right)$$

$$\frac{2}{5} \cdot \frac{\cancel{49}^7}{\cancel{45}^5} = \left(\frac{14}{75}\right)$$

$$\frac{1}{3} \cdot \frac{2^3}{5} = \frac{8}{15}$$

$$\frac{4}{3} \cdot \frac{13}{5} = \frac{52}{15}$$

$$15 \overline{) 52} \begin{array}{r} 3 \\ -45 \\ \hline 7 \end{array}$$

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Shape: fractions, mixed → improper

operate: KCF, cross cancel if possible

Simplify: reduce to lowest terms  
improper → mixed #

$$\frac{2}{5} \div \frac{1}{2} \rightarrow \frac{2}{5} \div \frac{3}{2}$$

$$\frac{2}{5} \times \frac{2}{3} = \frac{4}{15}$$

## Prime Factorization

GCF

LCM

Reduce

Multiply

$$\begin{array}{cc}
 42 & 16 \\
 \wedge & \wedge \\
 7 & 4 & 4 \\
 \wedge & \wedge & \wedge \\
 2 & 2 & 2 & 2
 \end{array}$$

GCF:  $\textcircled{2} \cdot 3 \cdot 7$

$\textcircled{2} \cdot 2 \cdot 2 \cdot 2$

LCM:

$$\begin{array}{ccccccc}
 2 & & & & & & \\
 2 & 2 & 2 & 2 & 3 & 7 & \\
 \hline
 2 & \cdot & 2 & \cdot & 2 & \cdot & 2 & \cdot & 3 & \cdot & 7
 \end{array}$$

LCM:  $\textcircled{336}$

$\textcircled{2}$



$$\frac{45}{49} \cdot \frac{4}{15}$$

$$\frac{\cancel{3} \cdot 3 \cdot \cancel{5}}{7 \cdot 7} \cdot \frac{2 \cdot 2}{\cancel{3} \cdot \cancel{5}}$$

$$\frac{12}{49}$$

$$45: 3 \cdot 3 \cdot 5$$

$$49: 7 \cdot 7$$

$$4: 2 \cdot 2$$

$$15: 5 \cdot 3$$

Equivalent  $\div$  Problems

$$\$12 \div 16$$

$$\frac{\$12}{16} \div \frac{2}{2} = \frac{6}{8} \div \frac{2}{2} = \frac{3}{4}$$

$$\$0.75$$

Average, mean,  $\frac{1}{2}$  way between

Sum  $\div$  # of addends